

# **Naval Surface Warfare Center Carderock Division**

West Bethesda, MD 20817-5700

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**NSWCCD-63-TR-2000/249** July 2000

Survivability, Structures, and Materials Directorate  
Technical Report

## **Identification of Weather Deck Runoff Discharge Constituents Onboard a U.S. Coast Guard Island Class (WPB) Patrol Boat**

by:

Mary L. Wenzel  
Carderock Division, Naval Surface Warfare Center

NSWCCD-63-TR-2000/249 July 2000



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Section 325 of the 1996 National Defense Authorization Act, "Discharges from Vessels of the Armed Forces", requires the Navy to comply with Uniform National Discharge Standards (UNDS) to control the overboard discharge of incidental wastewaters from ships of the Armed Forces. During Phase I of the UNDS initiative, it was determined weather deck runoff requires a Marine Pollution Control Device (MPCD) to control the discharge. At the request of Naval Sea Systems Command (NAVSEA 05L 13), representatives from Carderock Division, Naval Surface Warfare Center, Puget Sound Naval Shipyard, and M. Rosenblatt & Son, Inc., conducted a shipboard assessment aboard a U.S. Coast Guard Island Class (WPB) Patrol Boat to identify constituents that have the potential to contribute to weather deck runoff. The data obtained during the assessment will be used to develop the MPCD for weather deck runoff. The shipboard assessment team conducted three pier-side assessments to observe and document topside equipment and processes, general housekeeping practices and their associated materials. In addition, the team solicited crew feedback regarding methods to reduce or eliminate discharge constituents and identified potential MPCDs. As a result of the information obtained and the observations made during the assessment, and the lack of topside equipment that uses hazardous materials, the team concluded that there are very few hazardous constituents which have the potential to contribute to weather deck runoff aboard a WPB class ship. Due to the unique mission of WPB class ships, topside contaminants result from both the conduct of routine/planned maintenance as well as from the transport and holding of illegal migrant personnel on the weather decks. The primary constituents identified as having the potential to contribute to weather deck runoff as a result of shipboard maintenance (in order of : predominance) are: Simple Green™ detergent used to clean the weather decks and Brite Creme™ used to clean the hull; MIL-G-18458 grease used to ; lubricate the wire rope on the boat crane, and gasoline which has the potential to leak from the gasoline containers stored on the fantail. In addition, i human waste from the portable toilet and other debris (hair, food, personal products) that result from the transfer and holding of illegal migrant personnel 'on the weather decks also has the potential to contribute to weather deck runoff. The shipboard assessment team identified several MPCDs currently in use, including: sand bags are placed around refueling stations when receiving fuel; zip-down nylon covers are installed on fuel transfer stations to prevent water from entering the stations; buckets are placed under fitting connections fuel; zip-down nylon covers are installed on fuel transfer stations to prevent water from entering the stations; buckets are placed under fitting connections during refueling operations; and nylon covers are placed on exposed equipment such as the inflatable boat, boat crane and machine guns when in port. The team also identified several potential marine pollution control devices to reduce the potential of hazardous constituents entering surrounding waters, including: install deck coaming around the fantail; install containment enclosures around the gasoline cans that will not interfere with their quick discharge; and install permanent toilet facilities topside (piped to the ships holding tank) for use by illegal

migrant personnel. However, any modification to an Island Class patrol boat must first address its impact on the operation of the ship in terms of its weight and space requirements, effect on other ship systems, life cycle cost, safety and ship's mission.

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The conduct of shipboard assessments to identify constituents which have the potential to contribute to weather deck runoff is a teaming initiative. The team members are: John Baillargeon, Puget Sound Naval Shipyard; James Surgeon, M. Rosenblatt and Son, Inc.; and Mary Wenzel, Carderock Division, Naval Surface Warfare Center.

## EXECUTIVE SUMMARY

Section 325 of the 1996 National Defense Authorization Act, “Discharges from Vessels of the Armed Forces,” requires the Navy to comply with Uniform National Discharge Standards (UNDS) to control the overboard discharge of incidental wastewaters from ships of the Armed Forces. During Phase I of the UNDS initiative, it was determined that weather deck runoff requires a Marine Pollution Control Device (MPCD) to control the discharge.

At the request of Naval Sea Systems Command (NAVSEA 05L13), representatives from Carderock Division, Naval Surface Warfare Center, Puget Sound Naval Shipyard, and M. Rosenblatt & Son, Inc., conducted shipboard assessments aboard three U.S. Coast Guard Island Class (WPB) Patrol Boats to identify constituents that have the potential to contribute to weather deck runoff. The data obtained during the assessment will be used to develop the MPCD for weather deck runoff. Prior to conducting shipboard assessments, all ships applicable to UNDS were analyzed to determine similarities and grouped into one of nine categories: (1) air capable, carrier; (2) air capable, amphibious assault; (3) surface combatant; (4) auxiliary; (5) service craft; (6) towed support; (7) patrol/small craft; (8) submersible; and (9) research vessel. WPB class ships are representative of ships in the patrol/small craft category.

A three-person shipboard assessment team conducted pierside assessments at two different homeports in the same state to observe and document topside equipment and processes, general housekeeping practices and their associated materials. In addition, the team solicited crew feedback regarding methods to reduce or eliminate discharge constituents and identified potential MPCDs. As a result of the information obtained, the observations made, and the lack of topside equipment that uses hazardous materials, the team concluded that there are very few hazardous constituents which have the potential to contribute to weather deck runoff aboard a WPB class ship. Due to the unique mission of WPB class ships, topside contaminants result from both the conduct of routine/planned maintenance as well as from the transport and holding of illegal migrant personnel on the weather decks. The primary constituents identified as having the potential to contribute to weather deck runoff as a result of shipboard maintenance (in order of predominance) are: Simple Green™ detergent used to clean the weather decks, Brite Creme™ used to clean the hull; MIL-G-18458 grease used to lubricate the wire rope on the small boat crane, and gasoline which has the potential to leak from the gasoline containers stored on the fantail. In addition, human waste from the portable toilet and other debris (hair, food, personal products) that result from the transfer and holding of illegal migrant personnel on the weather decks also has the potential to contribute to weather deck runoff.

The shipboard assessment team identified MPCDs currently in use: (a) sand bags are placed around refueling stations when receiving fuel; (b) zip-down nylon covers are installed on fuel transfer stations to prevent water from entering the stations; (c) buckets are placed under fitting connections during refueling operations; and (d) nylon covers are placed on exposed equipment such as the inflatable boat, boat crane and machine guns when in port. The team also identified potential MPCDs to reduce the probability of hazardous constituents entering surrounding waters: (a) installation of deck coaming around the fantail; (b) installation of containment enclosures around the gasoline cans that will not interfere with their quick discharge; and (c) installation of permanent toilet facilities topside (piped to the ships holding tank) for use by illegal migrant personnel. However, any modification to an Island Class patrol boat must first address its impact on the operation of the ship in terms of its weight and space requirements, effect on other ship systems, life cycle cost, safety and ship’s mission.

## INTRODUCTION

Uniform National Discharge Standards. On 10 February 1996, President Clinton signed into law the Fiscal Year 1996 National Defense Authorization Act. Section 325 of the Authorization Act, “Discharges from Vessels of the Armed Forces,” requires the Department of Defense and the Environmental Protection Agency (EPA) to jointly develop Uniform National Discharge Standards (UNDS) for wastewater discharges, other than sewage, incidental to the normal operation of a vessel of the Armed Forces. The Act applies to discharges for which it is reasonable and practicable to require the use of a Marine Pollution Control Device (MPCD) to mitigate adverse impacts on the marine environment. The intent of the Act is to establish a consistent set of vessel effluent standards that enhances environmental protection and provides the Armed Forces with mission-related operational flexibility.

Naval Sea Systems Command (NAVSEA 05L13) and EPA have conducted equipment expert meetings with cognizant life cycle managers and equipment experts to gain knowledge on equipment operation and to identify additional information required to evaluate each discharge. In addition, NAVSEA and EPA performed nature of discharge analyses and determined that weather deck runoff has the potential for causing an adverse environmental effect. Preliminary practicability analyses showed that at least one reasonable and practicable MPCD exists. As a result, NAVSEA and EPA determined that weather deck runoff will require an MPCD.

Weather deck runoff consists primarily of water from rainfall, deck washdowns, and ship operations in heavy seas that drains directly into surrounding waters. Sources of contaminants that may be present in deck runoff include materials commonly used on decks and in topside equipment when conducting routine deck operations, maintenance, and general housekeeping aboard all classes of vessels of the Armed Forces (e.g., paint debris, fuels, lubricants, cleaning compounds, and solvents). Characterization of the discharge is being accomplished through shipboard assessments of topside processes, equipment, and operations, and by interviewing the ship’s crew while they are engaged in normal operations.

NAVSEA (05L13) established a three-person shipboard assessment team, comprised of representatives from the following organizations: Carderock Division, Naval Surface Warfare Center (NSWCCD); Puget Sound Naval Shipyard (PSNS); and M. Rosenblatt & Son, Inc.

Prior to performing the shipboard assessments, representatives from NSWCCD and PSNS conducted a comprehensive evaluation of all ship classes applicable to UNDS. All ships listed in the document “*Ships Applicable to UNDS - Vessel Class Listing with Number of Vessels per Class (Active Vessels Only)*” were analyzed to determine similarities. The analysis included ship mission, topside equipment, weather deck surface area, age of ships in class and number of ships in class. As a result of the analyses, each class of ship was placed into one of nine platform categories: (1) air capable, carrier; (2) air capable, amphibious assault; (3) surface combatant; (4) auxiliary; (5) service craft; (6) towed support; (7) patrol/small craft; (8) submersible; and (9) research vessel. A listing of the platform categories is shown in Appendix A.

A list was developed to identify class-specific topside processes and equipment that have the potential to contribute to weather deck runoff. All data were reduced to identify specific classes of vessels to survey in order to ensure data was obtained on each topside process and equipment. After completing this process, it was determined that ships representative of the towed support, submersible and research vessel classes would not be surveyed. The rationale for this decision was: (1) they do not have unique topside equipment; and (2) they do not perform unique maintenance processes topside. In summary, conducting shipboard assessments aboard ships in the towed support, submersible and research vessel categories would not be cost effective since their study is not expected to provide any new data not already available from the study of the other six platform categories. A matrix showing the class-specific processes and ships to be surveyed is provided as Appendix B.

This report provides the results of three shipboard assessments conducted aboard U.S. Coast Guard Island Class (WPB) Patrol Boats. WPBs are 110-foot patrol boats manned by a crew of 17 personnel. The ships' missions include search and rescue, counter-narcotics enforcement, living marine resources law enforcement, alien migration interdiction operations and national security/defense operations. These vessels perform law enforcement operations that are conducted in areas that are within 0-12 nautical miles (nm) of the coastline as well as beyond the 12 nm limit. Due to the unique mission of these ships they are required to house and transport illegal migrant personnel on the weather deck. The issues associated with the transport of migrants are detailed in the Deck Washdown section of this report.

## **APPROACH**

Two surveys have been developed for use during the shipboard assessments: a baseline survey and a class-specific survey. The baseline survey was designed to obtain information common to all ships surveyed, e.g., coaming height, scupper locations, and identification of MPCDs and best management practices currently in use. The baseline survey will be used during every shipboard assessment and will serve as a baseline for comparison purposes when evaluating potential MPCDs. The class-specific survey was designed to obtain information related to processes that are specific to each class of ship. Copies of the baseline and class-specific surveys used aboard the WPB class ships are provided as Appendices C and D, respectively.

The team conducted weather deck runoff discharge assessments onboard three WPB class ships in two operating regions within the same state on 14 and 15 July 1999. The objectives of the assessment were to observe and document topside equipment and processes performed by U. S. Coast Guard (USCG) personnel and to identify discharge constituents that contribute to weather deck runoff. Class-specific process information was obtained on: deck/superstructure maintenance and preservation; deck washdown; electronic intelligence and search/navigational systems; firemain systems; fuel transfer systems; general housekeeping; ships boats; ships boats launching systems; towing and mooring systems; and weapons systems. Although the data collected applies specifically to the ships surveyed, it is representative of other ships in the same platform category.

The shipboard assessments were conducted pierside in the vessels' homeport. The crews were observed performing various scheduled maintenance and preservation actions on topside equipment throughout the assessments. The ships operational zones and the percentage of time spent in each zone are shown in Tables 1 and 2, respectively:

**Table 1: Ships Operational Zone**

<b>Ship</b>	<b>Location</b>	<b>Previous 12 Months</b>	<b>Previous 12-24 Months</b>
Ship A Homeport A	Pierside	60	60
	At-Sea	40	40
Ship B Homeport A	Pierside	60	60
	At-Sea	40	40
Ship C Homeport B	Pierside	50	60 (in drydock)
	At-Sea	50	40

**Table 2: Percentage of At-Sea Time Within Various Operational Zones**

<b>Ship</b>	<b>Location</b>	<b>Previous 12 Months</b>	<b>Previous 12-24 Months</b>	<b>Type of Operations Performed</b>
Ship A Homeport A	0-3 nm	20	20	Law enforcement
	3-12 nm	75	75	Search & rescue, some law enforcement
	> 12 nm	5	5	Law enforcement, some search & rescue
Ship B Homeport A	0-3 nm	20	20	Law enforcement
	3-12 nm	75	75	Search & rescue, some law enforcement
	> 12 nm	5	5	Law enforcement, some search & rescue
Ship C Homeport B	0-3 nm	10	10	Law enforcement, transit and migrant holding
	3-12 nm	60	60	Transit and law enforcement
	> 12 nm	30	30	Patrol and support law enforcement

## RESULTS

Deck/Superstructure Maintenance & Preservation. The crew removes deck and superstructure paint using needle guns, disc sanders with recovery vacuum, palm sanders with dust collection bags, sandpaper and wire brushes; no chemical paint removers are used. Paint debris is swept and containerized for disposal ashore. The hull above the water line is painted every six months and is rough-sanded and wiped-down with denatured alcohol and rags prior to painting the surfaces with brushes and rollers; the ship is waterborne during the 7-10 day preparation and painting process. The crew uses paint manufactured by Interlux; specific color information is Interlac 800, White; Interlux Premium Yacht Enamel #344, International Orange; and Interlux Brightside Polyurethane #4253, Ocean Blue.

Deck Washdown. Due to the unique mission of WPB class ships, they are required to hold and transport illegal migrant personnel on the weather deck of the ship. It is important to note that the illegal migrants remain on the weather deck and do not enter the skin of the ship at any time. In addition, crewmembers must stand guard over the illegal migrants to ensure they do not jump overboard and swim ashore (which can easily be accomplished due to the lack of a topside enclosure to contain the migrants). As a result, a portable, unenclosed toilet is placed on the weather deck and remains topside until the illegal migrants disembark. The portable toilet quickly fills to capacity because it is not piped to the ships plumbing. The crew is then required to drain the toilet overboard and hose-down the area, resulting in topside conditions that are extremely unsanitary. The crew also brings food and blankets topside to feed and shelter the migrants. It is not uncommon for these vessels, especially the ships at Homeport B, to carry as many as 30-50 illegal migrants for a period of several days. The time the illegal migrants are aboard the ship is dependent upon several factors, e.g., how far away from a larger receiving vessel the ship is, how long it takes for legal issues to be resolved, and, in the case of Homeport B, how long it will take the ship to transit if they are required to return the migrants to their homeland. In either case, the illegal migrants are housed on the aft section of the weather deck and only moved forward during deck washdowns. The crew reported that fibers from blankets and clothes, as well as human hair and food particles litter the deck and are washed overboard; this most frequently (85%) occurs within the contiguous zone. The crew indicated that most weather deck runoff occurs during deck washdowns conducted after alien migration interdiction operations.

The ships at each homeport conducted deck washdown operations differently. The deck washdown processes for each homeport are described below.

**Homeport A:** When pierside, the crew uses fresh water supplied from pierside services to rinse Ship A daily and Ship B twice weekly. This rinsing process takes two hours using a ¾-inch garden hose at a pressure of 40-50 psi, normally without a on/off nozzle attached. No detergents are used when pierside. When underway, washdowns are conducted prior to entering port, approximately 17 times per month. The crew estimated 75% of underway washdowns are conducted within the contiguous zone. The crew uses fresh water and 0.5 gallons of Simple Green™ concentrated detergent and a small amount (2-3 ounces) of Brite Creme™ on the hull. The washdown process takes eight hours

(depending on how dirty the deck is) using fresh water and a garden hose equipped with an on/off nozzle. The crew estimated that the water is on for approximately 3 of the 8 hours.

**Homeport B:** When pierside, weekly washdowns are conducted using fresh water and 0.5 gallons of Simple Green™ concentrated detergent. This process takes approximately four hours using a ¾-inch garden hose with a water pressure of 50-70 psi and a on/off nozzle attached. When underway the crew uses salt water supplied from the ship's 160-psi firemain only; this process takes approximately 2-3 hours depending on how dirty the deck is.

Electronic Intelligence & Search/Navigational Systems. The crew cleans the WPB class surface search and navigation radar rotating assemblies using only fresh water supplied from the ship's fresh water system at approximately 50-70 psi. Ship's force personnel conducts no maintenance or repairs to drive assemblies with the exception of simple checks to determine oil and grease levels in the SPS-69 and SPS-73 radars. The WPB has two remote control search and rescue lights. The ship's navigation system uses a Global Positioning System (GPS).

Firemain Systems. The firemain system is designed to operate at 160 psi using the standard combination nozzle and hose stations. The system uses saltwater from the ship's environment and applies it in a fog, spray or stream to combat fires. Because the system uses saltwater obtained from the surrounding waters, it does not contribute constituents to weather deck runoff. (The crew at Homeport B also use this system to conduct deck washdown, particularly in the fantail area during alien migration interdiction operations.)

Fuel Transfer Systems. The WPB class is typically fueled through hoses from a refueling truck while the ship is at its operating pier. The ship has a capacity of 10,928 gallons of #2 Diesel Fuel Marine (DFM). Refueling stations are located on the forward section of the ship's superstructure, both port and starboard. All fuel transfer pumping gear is located below deck and is common to both refueling stations, with the above-deck valves and piping located in a containment enclosure. The refueling stations are covered with canvas zip-down covers secured to the ship with snaps to protect the equipment from the elements as shown in Appendix E. In addition, the crew installs threaded plugs in the containment enclosure. During refueling evolutions, an oil boom is placed around the ship and all deck drains are plugged. The area around the refueling station is lined with sandbags to assist in containment in the event of an accidental spill. The fuel depot personnel maintain spill kits on the pier. There is potential for the fuel transfer system to contribute to weather deck runoff. However, such potential exists only in cases of inadvertent fuel spills while connecting or disconnecting the transfer hoses or in the event of a fuel hose rupture. Both inadvertent spills and hose ruptures are attributable to equipment failure and are not incidental to normal operations of a vessel, and therefore, are not subject to UNDS.

General Housekeeping. The assessment team observed the crew sweeping and swabbing the deck throughout the day. During the pierside assessments, all dirt and debris was swept, containerized and turned in to the homeports Hazardous Materials Minimization Center. Since the overboard

discharge of detergents at Homeport A is prohibited, the crew at Homeport A swabs their decks using a mop dampened with fresh water and a very small amount of Simple Green™; the crew ensures excess water containing the detergent does not drain overboard in port. The primary constituent resulting from general housekeeping is a small amount of Simple Green™ detergent.

**Ships Boats.** The WPB class carries one 17-foot Avon Rigid-Hulled Inflatable Boat (RHIB) with a 90-horsepower Johnson outboard engine with a through-prop exhaust system. The RHIB is refueled using gasoline supplied from 6-gallon cans. Two 6-gallon cans of gasoline and one 2.5-gallon can of Shell 30W motor oil are maintained inside the RHIB and eight 6-gallon cans of gasoline are maintained topside. The crew washes down the RHIB following every use and during major ship cleanings using Simple Green™ detergent. As shown in Appendix F, a cover is placed over the RHIB while the ship is in port to protect it from the elements. The engine on each RHIB is operated for 2-3 minutes each time the RHIBs are brought onboard (approximately 15 times a month). The primary constituents that have the potential to contribute to weather deck runoff are: (1) gasoline spilled when refueling the RHIB onboard ship; and (2) contaminants resulting from the onboard operation of the outboard engines on a daily basis. (A separate UNDS Discharge Assessment Team will address small boat engine wet exhaust.)

**Ships Boats Launching Systems.** One Electro/Hydraulic Sealift Appleton Marine Crane with ¾-inch cable is used to launch and recover the RHIB from surrounding waters. This crane uses NAPA Dextron III hydraulic fluid with a normal operating pressure of 1,800 psi, supplied from the crane's 15-gallon reservoir located below deck. The crane has a lifting capacity of 1,750 pounds. A cover is placed over the crane while the ship is in port to protect the equipment from the weather and reduce corrosion. The cable is cleaned using P-D 680 Type III and greased using MIL-G-18458. A tarp is spread on the weather deck prior to cleaning and greasing the cable to contain the materials. The contributing constituent to weather deck runoff from the crane is the MIL-G-18458 grease used to lubricate the cable.

**Towing and Mooring Systems.** The crew performs all towing and mooring using multi-strand nylon line. No preservation measures are taken other than to inspect and replace the nylon line when required. Cleaning is limited to fresh or seawater rinses when required. The towing and mooring system does not contribute any constituents to weather deck runoff.

**Weapon Systems.** Systems employed aboard the WPB class are one MK38 25MM machine gun located on the forecastle and two 50-caliber M2HP machine guns mounted port and starboard of the open bridge. All machine guns are cleaned using fresh water and Simple Green™. Cleaner Lubricant and Preservative (CLP), MIL-L-63460, is applied to the 50 caliber gun mounts and the MK38 25MM gun mount. Approximately 2 ounces of CLP are applied using an acid brush. Covers are installed on the guns when the ship is in port to protect the equipment from the weather and prevent corrosion, Appendix G. Since machine guns are covered when in port the only constituent that has the potential to contribute to weather deck runoff is MIL-L-63460; however, the potential only exists if the ship is operating in the contiguous zone during rainfall or heavy seas.

### Topside Equipment/Systems and Materials (by Deck Level)

- Main Deck/Forecastle:
  - Anchor windlass operated by an electric motor.
  - One MK38 25MM machine gun.
  - Two hazardous materials lockers.
  - Two seawater fire stations.
  - Two fueling stations.
- Main Deck/Fantail:
  - One Sealift Appleton Marine crane with ¾” steel cable. The crane uses NAPA Dextron III hydraulic fluid.
  - 17-inch Rigid-Hulled Inflatable Boat (RHIB) with a 90-horsepower outboard engine.
  - Eight 6-gallon cans of gasoline.
  - One P-250 pump with two 6-gallon cans of gasoline.
  - Three lifeboats.
  - Pyrotechnics locker.
  - One P-1 pump (used for small craft de-watering).
  - One bilge pumping station.
- 01 Level:
  - Four hoses used for the P-1 pump.
  - One 50-caliber gun locker.
- 02 Level:
  - Two remote control search and rescue lights.
  - Self-contained Sperry radar system.

A line drawing depicting the WPB Island Class Patrol Boat is provided as Appendix H. Although not all the hazardous constituents listed in this have the potential to contribute to weather deck runoff, a copy of the Material Safety Data Sheets for all products discussed are provided as Appendix I.

Maintenance Practices. A 5-person Maintenance Augmentation Team (MAT), assigned to the ship's homeport, performs maintenance on all the ship's equipment. Maintenance is conducted in accordance with Maintenance Procedure Cards (MPCs) developed by the USCG Engineering Logistics Center.

Deck Coaming and Drains. The main deck has no coamings with the exception of the forecastle, which has a 2.5-inch coaming installed. Levels above the main deck drain directly to the deck below.

## MARINE POLLUTION CONTROL DEVICES IN USE

The shipboard assessment team identified several MPCDs currently in use, including:

- Sand bags are placed around refueling stations when receiving fuel.
- Zip-down canvas covers (attached to the ship by snaps) are placed over the fuel transfer station to prevent water from entering the station.
- Buckets are placed under fitting connections during refueling operations.
- Cranes and P-250 fire pumps are covered with canvas covers when in port.
- Nylon covers are placed on exposed equipment such as the RHIB, machine guns and RHIB crane.

## POTENTIAL MARINE POLLUTION CONTROL DEVICES

As a result of the information obtained during the ship assessment, the team identified several **potential** marine pollution control devices. However, before any new system is used aboard a warship, the Navy must first address its impact on the operation of that ship in terms of its weight, power and space requirements; affect on other ship systems, life cycle cost, and safety; and the mission of the ship.

- Maintain spill kits aboard ship.
- Install coamings on the deck around the fantail area.
- Install containment enclosures around the 6-gallon gasoline cans stored on the fantail that will not interfere with their quick discharge.
- Install permanent toilet facilities topside for use by illegal migrant personnel.

## CONCLUSIONS

As a result of the information obtained, the observations made, and the lack of topside equipment that uses hazardous materials, the team concluded that there are minimal hazardous constituents which have the potential to contribute to weather deck runoff aboard a WPB class ship. All hazardous materials used onboard the ship are obtained from the homeport Hazardous Material Minimization Center. It was noted that no excessive amounts of any product are stored onboard, only what is required to support an operating period. Due to the unique mission of WPB class ships, topside contaminants result from both the conduct of routine/planned maintenance as well as from the transport and holding of illegal migrant personnel on the weather decks. The primary constituents identified as having the potential to contribute to weather deck runoff as a result of shipboard maintenance (in order of predominance) are: Simple Green™ detergent used to clean the weather decks, Brite Creme™ used to clean the hull; MIL-G-18458 grease used to lubricate the wire rope on the small boat crane, and gasoline which has the potential to leak from the gasoline containers located on the fantail. In addition, human waste from the portable toilet and other debris (hair, food, personal products) introduced as a result of alien migration interdiction operations also has the potential to contribute to weather deck runoff.

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### Weather Deck Runoff Platform Categories

<u>SHIP CLASS</u>	<u>NUMBER OF SHIPS</u>	<u>SHIP TYPE NUMBER</u>	<u>SHIP FUNCTION</u>	<u>LENGTH</u>	<u>PLATFORM CATEGORY</u>
<b>NAVY</b>					
CV 59	1	CV 62	Forrestal class aircraft carrier	1052'	air capable, carrier
CV 63	3	CV 64	Kitty Hawk class aircraft carrier	1052'	air capable, carrier
CVN 65	1	CVN 65	Enterprise class aircraft carrier(nuc)	1101'	air capable, carrier
CVN 68	7	CVN 72	Nimitz class aircraft carrier (nuclear)	1092'	air capable, carrier
LHA 1	5	LHA 3	Amphibious assault ship (gen.purps)	833'	air capable, amphibious assault
LHD 1	4	LHD 4	Amphibious assault ship (multi-purps)	844'	air capable, amphibious assault
LPH 2	2	LPH 9	Amphibious assault ship (helo carr)	602'	air capable, amphibious assault
AGF 11	1	AGF 11	Flagship, 6th Fleet. conv. LPD	568'	air capable, amphibious assault
AGF 3	1	AGF 3	Flagship, 3rd Fleet. conv. LPD	521'	air capable, amphibious assault
LCC 19	2	LCC 19	Amphibious command ship	636'	air capable, amphibious assault
LPD 14	2	LPD 15	Amphibious transport docks	568'	air capable, amphibious assault
LPD 4	3	LPD 4	Amphibious transport docks	568'	air capable, amphibious assault
LPD 7	3	LPD 8	Amphibious transport docks	568'	air capable, amphibious assault
LSD 36	5	LSD 36	Anchorage class dock landing ship	553'	air capable, amphibious assault
LSD 41	8	LSD 48	Whidbey Island class dock landing	609'	air capable, amphibious assault
LSD 49	3	LSD 50	Harpers Ferry class dock landing	609'	air capable, amphibious assault
LST 1179	3	LST 1179	Newport class tank landing ship	522'	air capable, amphibious assault
CG 47	27	CG 54	Ticonderoga class Cruiser	567'	surface combatant
CGN 36	2	CGN 36	California class Cruiser (nuclear)	596'	surface combatant
CGN 38	1	CGN 41	Virginia class Cruiser (nuclear)	585'	surface combatant
DD 963	31	DD 968	Spruance class Destroyer	563'	surface combatant
DDG 51	18	DDG 51	Arleigh Burke class Destroyer	504'	surface combatant
DDG 993	4	DDG 994	Kidd Class Destroyer	563'	surface combatant
FFG 7	43	FFG 34	Oliver Hazard Perry class Frigate	445'	surface combatant
AO 177	5	AO 177	Fleet oiler	708'	axiliary
AOE 1	4	AOE 2	Fast combat support-Sacramento cls	795'	axiliary
AOE 6	3	AOE 8	Fast combat support-Supply class	755'	axiliary
AFDB 4	1	AFDB 7	Large aux. floating drydock	413'	service craft
AFDB 8	1	AFDB 8	Large aux. floating drydock	825'	service craft
AFDL 1	2	AFDL 23	Small aux. floating drydock	288'	service craft
AFDM 14	1	AFDM 14	Medium aux. floating drydock	598'	service craft
AFDM 3	4	AFDM 6	Medium aux. floating drydock	622'	service craft
ARD 2	1	ARD 5	Aux. repair drydock	486'	service craft
ARDM	3	ARDM 5	Medium aux. repair drydock	492'	service craft
ARS 50	4	ARS 53	salvage vessel	255'	service craft
AS 33	1	AS 33	submarine tender	644'	service craft
AS 39	3	AS 39	submarine tender	646'	service craft
EX YFU	1	IX 514	Basic Flgt. Training--Helo	125'	service craft
BH	8	BH 1	Boom Handling	24'	service craft
DB	4	DB 1	Distribution box	64'	service craft
DT	1	DT 1	Diving tender	74'	service craft
DW	7	DW 1	Dive workboat	50'	service craft
HH	7	HH 1	Hawser handling	30'	service craft
HL	3	HL 1	Hydrographic survey launch	var.	service craft
IX 308	2	IX 310	IX-308-torp trial,IX-310-barges	176'(308)	service craft
LH	3	LH 1	Line handling	var.	service craft
SLWT	24	SLWT 4013	Side loadable warping tug	84'	service craft
TD	2	TD 1	Target drone	56'	service craft
TR	24	TR 4	Torpedo retriever	var.	service craft
WT	1	WT 1	Warping tug	85'	service craft
YD	63	YD 113	Floating crane		service craft
YFB	2	YFB 83	Ferry boat or launch	180'	service craft
YFU 83	1	YFU 83	Harbor utility craft	135'	service craft

### Weather Deck Runoff Platform Categories

YFU 91	1	YFU 91	Harbor utility craft	115'	service craft
YM	2	YM 17	Dredge		service craft
YO 65	3	YO 220	Fuel oil barge	174'	service craft
YOG 5	3	YOG 78	Gasoline barge	174'	service craft
YSD 11	1	YSD 74	Seaplane wrecking derrick	104'	service craft
YTB 752	1	YTB 752	Edenshaw class large harbor tug	101'	service craft
YTB 756	3	YTB 759	Pontiac class large harbor tug	109'	service craft
YTB 760	68	YTB 826	Natick & Tuscumbia class lrg. har. tug	109'	service craft
YTL 422	1	YTL 602	small harbor tug	66'	service craft
YTM	11	YTM 1	medium harbor tug		service craft
YTT 9	3	YTT 10	torpedo trials craft	186'	service craft
YLC	1	YLC 1	Salvage lift craft, light		service craft
YMN	1	YMN 1	dredge		service craft
YPD	4	YPD 37	Floating pile driver		service craft
ASDV	2	ASDV 2	Auxiliary swimmer delivery vehicle	134'	service craft
CT	14	CT 1	craft of opportunity COOP trainer	80'	service craft
MC	2	MC 1	Mine countermeasure support	27'	service craft
MCM 1	14	MCM 12	Avenger class mine warfare	224'	service craft
MHC 51	4	MHC 52	Osprey class mine warfare	188'	service craft
APL	16	APL 15	Barracks craft		towed support
BT	4	BT 1	Bomb target	18'	towed support
IX 35	2	IX 502	Barracks ship	328'	towed support
IX 501	1	IX 501	Barracks ship	230'	towed support
WH	12	WH 1	Wherry	var.	towed support
YC	254	YC 1027	Open lighter		towed support
YCF	1	YCF 16	Car float		towed support
YCV	9	YCV 10	Aircraft transportation lighter		towed support
YDT	3	YDT 16	Diving tender		towed support
YFN	157	YFN 1102	covered lighter		towed support
YFNB	11	YFNB 30	Large covered lighter		towed support
YFND	2	YFND 29	Dry dock companion craft		towed support
YFNX	8	YFNX 15	Special purpose lighter	110'	towed support
YFP	2	YFP 11	Floating power barge		towed support
YFRN	3	YFRN 1	Refrigerated covered lighter		towed support
YFRT	2	YFRT 287	Range tender	133'	towed support
YGN 80	3	YGN 80	Garbage lighter		towed support
YNG	2	YNG 11	Gate craft		towed support
YOGN	12	YOGN 10	gasoline barge		towed support
YON	48	YON 100	fuel oil barge		towed support
YOS	14	YOS 10	oil storage barge		towed support
YR	25	YR 26	Floating workshop		towed support
YRB	4	YRB 1	Repair and berthing barge		towed support
YRBM	39	YRBM 1	Repair, berthing and messing barge		towed support
YRDH	1	YRDH 6	floating drydock workshop 'hull'		towed support
YRR	9	YRR 1	radiological repair barge		towed support
YRST	3	YRST 1	salvage craft tender		towed support
YSR	14	YSR 11	sludge removal barge		towed support
YWN	6	YWN 147	water barge		towed support
AC	2	AC 2	Area command cutter	50'	patrol/small craft
HS	70	HS 1	Harbor security (Boston Whaler)	24'	patrol/small craft
LCAC 1	91	LCAC 1	Landing craft (air cushion)	88'	patrol/small craft
PB	31	PB 25	Patrol boat (w/e PBR)	var.	patrol/small craft
PBR	25	31RP664	Riverene Patrol craft	32'	patrol/small craft
PC 1	13	PC 9	Coastal defense ship	170'	patrol/small craft
PF	3	PF 1	Patrol craft, fast	51'	patrol/small craft
PK	1	PK1	Picket boat	45'	patrol/small craft
YP 654	1	YP 667	Patrol craft, training	80'	patrol/small craft

### Weather Deck Runoff Platform Categories

YP 676	27	YP 676	Patrol craft, training	108'	patrol/small craft
AP	6	AP 1	Area point system search craft	27'	patrol/small craft
AR	6	AR 1	Aircraft rescue		patrol/small craft
AT	21	AT 1	Armored troop carrier	36'	patrol/small craft
ATC	20	36AT721	Armoured troop carrier	36'	patrol/small craft
BW	4	BW 1	Boston Whaler	var	patrol/small craft
CA	1	CA 1	catamaran	26'	patrol/small craft
CC	4	CC 1	cabin cruiser (commercial)	var.	patrol/small craft
CM	151	CM 1	Landing craft, mechanized	var.	patrol/small craft
CU	40	CU 4	Landing craft, utility	135'	patrol/small craft
LA	1	LA 1	Landing craft, assault	96'	patrol/small craft
LCM(3)	2	LCM(3) 1	Mechanized landing craft		patrol/small craft
LCM(6)	60	LCM(6) 1	Mechanized landing craft	56'	patrol/small craft
LCM(8)	100	LCM(8) 1	Mechanized landing craft	74'	patrol/small craft
LCPL	130	LCPL 1	Landing craft personnel light	36'	patrol/small craft
LCU 1610	40	LCU 1614	Landing craft, utility	134'	patrol/small craft
LCVP	10	LCVP 1	Landing craft vehicle and personnel	36'	patrol/small craft
ML	3	ML 1	Motor launch	var.	patrol/small craft
MM	5	MM 1	Marine mammal support craft	25'	patrol/small craft
MW	121	MW 25	Motor Whaleboat	26'	patrol/small craft
NM	1	NM 1	Noise measuring	73'	patrol/small craft
NS	120	NS 1	Non-standard (commercial)	var.	patrol/small craft
PE	211	PE 16	personnel craft	var.	patrol/small craft
PL	147	PL 1	Landing craft, personnel light	var.	patrol/small craft
PR	8	PR 1	Plane personnel and rescue	var.	patrol/small craft
PT	266	PT 6	Punt	var.	patrol/small craft
RB	270	RB 1	Rigid Inflatable boat	var.	patrol/small craft
RX	15	RX 1	Rigid inflatable (non-standard)	var.	patrol/small craft
SC	6	SC 1	Support craft	var.	patrol/small craft
SS	12	SS 1	swimmer support	var.	patrol/small craft
TC	19	TC 1	Training craft	var.	patrol/small craft
UB	793	UB 7	small utility boat	var.	patrol/small craft
VP	12	VP 1	Landing craft, vehicle personnel	36'	patrol/small craft
WB	338	WB 1	Work boat	var.	patrol/small craft
AGSS 555	1	AGSS 555	Dolphin deep research sub	165'	submersible
DSRV-1	2	DSRV 2	Deep submergence rescue vessel	50'	submersible
DSV 1	3	DSV 2	Deep submergence vehicle	22'	submersible
SSBN 726	17	SSBN 731	Trident class Strategic missile sub	560'	submersible
SSN 637	13	SSN 678	Sturgeon class Attack sub	292'	submersible
SSN 640	2	SSN 645	Franklin class Strategic missile sub	425'	submersible
SSN 671	1	SSN 671	Narwhal class Attack sub	314'	submersible
SSN 688	56	SSN 753	Los Angeles class Attack sub	360'	submersible
SES 200	1	IX 515	Operational Demo. air supported hull	160'	research vessel
AGER 2	1	AGER 2	Environmental research ship		research vessel
AGOR 21	1	AGOR 22	Oceanographic research	204'	research vessel
AGOR 23	2	AGOR 24	Oceanographic research	274'	research vessel
SB	1	SB 1	Sound/sail	41'	not applicable
ST	34	ST 1	Sail training craft	44'	not applicable
YL	7	YL 1	Yawl	30'	not applicable
<b>MSC</b>					
AH 19	2	TAH 20	Hospital Ship	894'	air capable, amphibious assault
AE 26	8	TAE 27	Ammunition ship	564'	auxiliary
AFS 1	8	TAFS 5	Combat Store Ships	581'	auxiliary
AKR 287	8	TAKR 287	Sealift ship	946'	auxiliary
AO 187	12	TAO 198	Oiler	677'	auxiliary
ARC 7	1	TARC 7	Cable repair ship	502'	service craft

### Weather Deck Runoff Platform Categories

ATF 166	7	TATF 172	Oceangoing Tug	240'	service craft
AG 194	2	TAG 195	Misc. Auxiliary	246'	research vessel
AGM 22	2	TAGM 23	Missile Rng. Instrumentation Ship	563'	research vessel
AGOS 1	5	TAGOS 12	Ocean Surveillance Ships	224'	research vessel
AGOS 19	4	TAGOS 20	Ocean Surveillance Ships	234'	research vessel
AGS 26	2	TAGS 27	Survey Ships	285'	research vessel
AGS 45	1	TAGS 45	Survey Ships	442'	research vessel
AGS 51	2	TAGS 52	Survey Ships	208'	research vessel
AGS 60	4	TAGS 62	Survey Ships	328'	research vessel
AKR 295	3	TAKR 296	?	?	?
<b>USCG</b>					
WHEC	12	WHEC 715	High Endurance Cutter	378'	surface combatant
WMEC	13	WMEC 901	Medium Endurance Cutter "Bear"	270'	surface combatant
WMEC	16	WMEC 615	Medium Endurance Cutter "Reliance"	210'	surface combatant
WMEC	1	WMEC 38	Medium Endurance Cutter "Storis"	230'	surface combatant
WMEC	2	WMEC 167	Medium Endurance Cutter "Acushnet"	213'	surface combatant
WAGB	2	WAGB 10	Ice Breaker "Polar"	399'	service craft
WAGB	1	WAGB 83	Ice Breaker "Mackinaw"	310'	service craft
WLB	2	WLB 201	Seagoing Buoy Tender "Juniper"	225'	service craft
WLB	10	WLB 277	Seagoing Buoy Tender "Balsam" [Ser. A]	180'	service craft
WLB	2	WLB 297	Seagoing Buoy Tender "Balsam" [Ser. B]	180'	service craft
WLB	15	WLB 388	Seagoing Buoy Tender "Balsam" [Ser.C]	180'	service craft
WLM	6	WLM 551	Coastal Buoy Tender "Ida Lewis"	175'	service craft
WLM	5	WLM 685	Coastal Buoy Tender "Red"	157'	service craft
WLM	6	WLM 540	Coastal Buoy Tender "White"	133'	service craft
WLIC	4	WLIC 800	Inland Construction Tender "Pamlico"	160'	service craft
WLIC	3	WLIC 298	Inland Construction Tender "Cosmos"	100'	service craft
WLIC	2	WLIC 75301	Inland Construction Tender "Anvil" [A]	75'	service craft
WLIC	3	WLIC 75303	Inland Construction Tender "Anvil" [B]	75'	service craft
WLIC	4	WLIC 75306	Inland Construction Tender "Anvil" [C]	75'	service craft
WLI	1	WLI 313	Inland Buoy Tender "Cosmos"	100'	service craft
WLI	1	WLI 642	Inland Buoy Tender "Buckthorn"	100'	service craft
WLI	2	WLI 65400	Inland Buoy Tender "Improved Berry"	65'	service craft
WLI	2	WLI 65303	Inland Buoy Tender "Berry"	65'	service craft
WLR	1	WLR 311	River Buoy Tender "Sumac"	115'	service craft
WLR	5	WLR 75500	River Buoy Tender "Kankakee"	75'	service craft
WLR	9	WLR 75401	River Buoy Tender "Gasconade"	75'	service craft
WLR	6	WLR 65501	River Buoy Tender "Ouachita"	65'	service craft
WTGB	9	WTGB 101	Icebreaking Tug "Bay"	140'	service craft
WYTL	14	WYTL 65601	Small Harbor Tug	65'	service craft
ANB	20		Aids to Navigation boat	58'	service craft
ANB	25		Aids to Navigation boat	55'	service craft
ANB	32		Aids to Navigation boat	45'	service craft
ANB	58		Aids to Navigation boat	21'	service craft
?	17		Buoy servicing boat	49'	service craft
?	9		Buoy servicing boat	46'	service craft
WPB	16	WPB 1301	Patrol Boat "Island" [series A]	110'	patrol/small craft
WPB	21	WPB 1317	Patrol Boat "Island" [series B]	110'	patrol/small craft
WPB	12	WPB 1338	Patrol Boat "Island" [series C]	110'	patrol/small craft
WPB	1	WPB 82312	Patrol Boat "Point" [series A]	82'	patrol/small craft
WPB	31	WPB 82333	Patrol Boat "Point" [series C]	82'	patrol/small craft
WPB	7	WPB 82371	Patrol Boat "Point" [series D]	82'	patrol/small craft
WFCI	5	WFCI 43501	Fast Coastal Interceptor	44'	patrol/small craft
PC	24		Raider type patrol craft	22'	patrol/small craft
MLB	4	MLB 52312	Motor lifeboat	52'	patrol/small craft
MLB		MLB 47200	Motor lifeboat	47'	patrol/small craft

### Weather Deck Runoff Platform Categories

MLB	105		Motor lifeboat	44'	patrol/small craft
?	1	SAR	Search and rescue	50'	patrol/small craft
?	14	SAR	Search and rescue	21'	patrol/small craft
?	207		Utility boat	41'	patrol/small craft
?	2		Utility boat	38'	patrol/small craft
?	28		Port Security Boat	31'	patrol/small craft
?	19		Surf rescue boat	30'	patrol/small craft
?	2	Hammerhead	Hammerhead Patrol craft	24'	patrol/small craft
<b>USAF</b>					
MR	5	MR-120-8801	Missile retriever boat	120'	service craft
MR	1	MR-85-1603	Missile retriever boat	85'	service craft
TG	1	TG-45-1919	Small Harbor Tug	45'	service craft
MLC	4	C-74-2205	LCM(8) type mech. Lndg. Crft.	74'	patrol/small craft
<b>US ARMY</b>					
C1MT123A	1	C1-MT-123A type	Heavy Lift ship, James McHenry	279'	auxiliary
LSV	6	LSV 01	Vehicle Landing Ship "Besson Class"	273'	auxiliary
LT	8	LT 130	Large Harbor Tug	128'	service craft
LT	18	LT 1937	Large Harbor Tug	107'	service craft
ST	11	ST 1988	Small Harbor Tug	70'	service craft
LCU	35	LCU 2001	Landing craft "LCU 2000 class"	174'	patrol/small craft
LCU	13	LCU 1667	Utility Landing Craft "LCU 1610 Class"	135'	patrol/small craft
LCM	126	LCM(8)	Mechanized Landing Craft "LCM(8)"	74'	patrol/small craft
LARC	30	LARC XV	Amphibious Vehicle	45'	patrol/small craft
LARC	19	LARC LX	Amphibious Vehicle	63'	patrol/small craft
LARC	3	LARC V	Amphibious Vehicle	35'	patrol/small craft

## Weather Deck Runoff Class Specific Processes/Equipment Matrix

Class Specific Process	AOE-6	CV/CVN	DDG-51	LCAC-1	LHD-1	MCM-1	WLB (USCG)	WPB (USCG)
<b>Air Operations</b>								
Fixed Wing		X						
Rotary Wing	X	X	X		X			
Aircraft Elevators		X			X			
Flight Deck Safety Nets	X	X	X		X			
Fire Assist Vehicles		X			X			
Ground Support Equipment	X	X			X			
ALRE		X						
RAST *								
Aircraft Washdown	X	X	X		X			
Aircraft Fueling	X	X	X		X			
<b>Buoy Handling Systems</b>							X	
<b>Deck/Superstructure Maintenance &amp; Preservation</b>	X	X	X	X	X	X	X	X
<b>Deck Washdown</b>	X	X	X	X	X	X	X	X
<b>Electronic Intelligence Systems</b>	X	X	X		X	X		X
Search/Navigational Systems	X	X	X	X	X	X	X	X
<b>Firemain Systems</b>	X	X	X		X	X	X	X
<b>Fuel Transfer Systems</b>	X	X	X	X	X	X	X	X
<b>General Housekeeping</b>	X	X	X	X	X	X	X	X
<b>Mine Handling Systems</b>						X		
<b>Ships Boats/Launching Systems</b>								
Ships Boats	X	X	X		X	X	X	X
Ships Boats Launching System	X	X	X		X	X	X	X
<b>Stores Handling Systems</b>	X	X	X		X			
<b>Towing &amp; Mooring Systems</b>	X	X	X		X	X	X	X
<b>Weapon Systems</b>	X	X	X		X	X	**	X

ALRE: Aircraft Launch and Recovery Equipment

RAST: Recovery, Assist, Securing and Traversing (system)

\* RAST installed on CG 49-73; FFG-8, 28, 29, 32, 33, 36-43, 45-61; DD 963-973, 975, 977, 978, 980-982, 985, 987-989, 991, 992, 997

\*\* Weapon capability not normally employed

# UNDS Weather Deck Runoff Survey

<b>Ship:</b> <b>USCG WPB Class Vessel</b>	<b>Date Commissioned:</b> <b>N/A</b>	<b>Platform Category:</b> <b>Patrol Craft</b>	<b>IN PORT</b> <input checked="checked" type="checkbox"/> <b>UNDERWAY</b> <input type="checkbox"/>
<b>Assessment Date:</b> <b>14-15 July 1999</b>	<b>Ship POC:</b>		

1

Does the ship conform to expected platform category? Yes

Comments: The crew of these vessels, perform a very challenging task in the performance of Alien Migration Interdiction Operations (AMIO).

2

During the previous 0-12 and 12-24 months what percentage of time was spent:

Location	Previous 12 Months	Previous 12-24 Months
Pierside	50-60%	60%
At-Sea	40-50%	40%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>

How much of the above **at-sea** time was spent operating within:

0-3 nm	10-20%	10-20%
3-12 nm	60-75%	60-75%
>12 nm	5-30%	5-30%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>

3

Describe shipboard operations when operating within:

0-3 nm Law enforcement (migrant holding)

3-12 nm Law enforcement/search and rescue

> 12 nm Law enforcement/search and rescue/migrant transport

4

List major weather deck equipment which has the potential to contribute to deck runoff:

Main Deck/Forecastle:

- Anchor windlass operated b an electric motor.
- One MK38 25MM machine gun
- Two hazardous materials lockers
- Two seawater fire stations
- Two fueling stations

Main Deck/Fantail

- One Sealift Appleton Marine crane with ¾" steel cable. Crane uses NAPA Dextron III hydraulic fluid
- 17' Rigid-Hulled Inflatable Boat (RHIB) with 90 HP outboard motor
- Eight 6-gallon cans of gasoline

## UNDS Weather Deck Runoff Survey

	-	One P-250 pump with two 6-gallon cans of gasoline
	-	Three life boats
	-	Pyrotechnics Locker
	-	One P-1 pump (used for small craft de-watering)
	-	One bilge pump station
		01 Level
	-	Four hoses used for the P-1 pump
	-	One .50 caliber gun locker
		02 Level
	-	Two remote control search and rescue lights
	-	Self-contained Sperry radar system
5		Evaluation of runoff potential from the weather deck:
a		Note location and height of coaming:
		The main deck has no coaming with the exception of the forecastle which has an 18" spray shield/coaming, that extends approximately half the length of the superstructure.
B		Note location and route of scuppers None
c		Note drainage routes from above deck levels:
		Drain directly to the deck below ultimately reaching the main deck and discharging overboard.
D		Identify all containment devices in use and corresponding equipment:
		The fueling stations are inside containment enclosures equipped with threaded plugs in the containment wall for draining in the event of fuel spill during refueling operations or draining of any gathered rain water.
E		Identify containment or design issues/problems: None noted
6		What preventive measures if any does ship employ to mitigate runoff?
		During refueling evolutions an oil boom is placed around the ship, and sandbags on the ship around the fueling station in the event of a fuel spill. Buckets are placed under the hose couplings to catch possible spills.
7		Identify potential design/equipment changes to mitigate runoff from:
a		Deck coamings and scupper drains: Installation of coaming around the fantail area.
B		Elevated deck drain routing: None
c		Equipment:
		Installation of containment enclosure around the gasoline rack located on the fantail to mitigate possible deck runoff due to a spill or leak of any one of the gasoline cans.

## UNDS Weather Deck Runoff Survey

d	Fuel transfer station:	None, the current containment enclosure is a great example of a possible fleet wide MPCD.
e	Exposed cable reels and wire rope containment:	None
f	Grease fittings and exposed bearing surfaces:	N/A
g	Exposed hydraulic hoses and manifolds:	N/A
8	Marine Pollution Control Devices (MPCD)	
a	Identify equipment in place to serve as a potential MPCD:	Nylon covers over exposed equipment such as the RHIB, gun mounts, Appleton crane And fuel transfer station.
b	Discuss potential MPCD effectiveness:	Assists in the prevention of corrosion of the equipment as well as provide a means of protection of maintenance materials being washed away due to rainfall.
c	Discuss shipboard impact of potential MPCD:	No negative impact to the ships performance.
d	Solicit suggestions for other potential MPCDs:	Install permanent toilet facilities topside for use by illegal migrant personnel Maintain spill kits aboard ship Install containment enclosures around the 6-gallon gasoline cans stored on the fantail. Install coamings on deck around fantail area
9	Best Management Practices (BMP)	
a	Identify BMPs currently in use:	The installation of covers over exposed equipment serves as an excellent BMP in mitigating the potential for constituent contribution to deck runoff. Sand bags are placed around refueling stations when receiving fuel. Buckets are placed under fitting connections during refueling operations
b	Discuss efficiency of BMP in use:	A low cost yet highly effect measure used to reduce corrosion and other corrective maintenance necessities of equipment as well as providing efforts in the prevention of deck runoff.
c	Discuss shipboard impact of BMP in use:	No negative impact.
d	Solicit suggestions for potential BMPs:	None

# USCG WPB Class Specific Process Appendix

## **Deck/Superstructure Maintenance & Preservation**

- a. Identify mechanical paint removal processes: Disk sanders w/recovery vacuum, palm sander w/recovery vacuum, sandpaper, wire brushes, and needle guns.
- b. Identify non-mechanical (chemical) paint removal processes: None
- c. How does the ship prepare deck surfaces for preservation: Light sanding and wipe down of area using rags and denatured alcohol.
- d. How are surface preservatives applied and what material is used: Paints are applied by brush. Materials used are; Primer-metal prep 6980 rustlok steel primer, Paints; international interlux 800 white, interlux premium yacht enamel 334 international orange, and interlux brightside polyurethane 4253 ocean blue.
- e. Identify clean up/waste disposal processes: Sweep and containerize, for disposal at the base HAZMAT pharmacy.

# **USCG WPB Class Specific Process Appendix**

## **Electronic Intelligence & Search/Navigational Systems**

- a. What processes are used for cleaning and lubrication of rotating assemblies: Fresh water washdowns, occasionally using Simple Green detergent. Units are self-contained and require an oil change on an annual basis.
- b. Identify maintenance/repair of drive assemblies: None
- c. Identify preservation processes for exterior structure and materials used: The Surface Search ANSPS 69 and the Navigation ANSPS 73 radar housing are made of plastic and fiberglass, no paints are applied.

# USCG WPB Class Specific Process Appendix

## Firemain Systems

- a. How is the sprinkler system maintained and tested: Not applicable
- b. How is the fire main supply system maintained and tested: All maintenance and testing of the system is performed IAW applicable Maintenance Procedure Cards (MPCs).
- c. Identify CO2 bottle bank preservation and maintenance processes: Not applicable, only portable CO2 bottles are on the weather decks.
- d. Identify fire station preservation and maintenance processes: All fire stations and applicable hardware are maintained IAW Maintenance Procedure Cards (MPCs). The fire station is preserved by light sanding, wiping with rags and denatured alcohol and applying red paint as needed.

# USCG WPB Class Specific Process Appendix

## **Fuel Transfer System**

- a. How are fuel transfer piping system and valves maintained: The WPB has two fueling stations, one port side and one starboard side. The stations share a common piping and stowage system, with a capacity of 10,928 gallons. All maintenance is performed IAW applicable Maintenance Procedure Cards (MPCs).
- b. Identify fuel transfer pump and control system maintenance: Not applicable, all equipment is located below decks.
- c. Are fuel transfer station cofferdams installed and are drain plugs used: Both fuel stations have cofferdams and threaded plugs installed for drainage. The stations are also protected with a nylon cover which reduces exposure to the weather.
- d. What does the ship do for fuel spill prevention and clean up during fueling evolution a boom is placed around the ship. Buckets are placed under the hose couplings for spill control. Spill kits are on standby located on the pier.
- e. How are fuel hoses and coupling maintained: Hose couplings are of a cam-lock quick disconnect type and are the responsibility of the fuel depot.

# USCG WPB Class Specific Process Appendix

## Ships Boats

- a. List small boat exterior hull maintenance and preservation processes: The RHIBs hull is painted annually, the extent of the work is dependent upon the condition of the vessel. Normal cleaning of the RHIBs hull is done using only fresh water.
- b. Identify power plant and drive system maintenance: Daily engine flushes are performed using fresh water, lasting approximately 2-3 minutes. Tune-ups are performed on an annual basis.
- c. How are craft bilges cleaned and what is done with the drainage: No cleaning process noted, the bilges are free drain.
- d. Observe small boat fueling and venting process: Not applicable during assessment.
- e. How are the ships boats cleaned and what materials are used: The boat is cleaned using fresh water and small amounts of Simple Green detergent

# **USCG WPB Class Specific Process Appendix**

## **Ships Boats Launching System**

- a. Identify processes for inspection and maintenance of davit/hoist assemblies: Visual inspections are performed prior to each operational use of the hoist.
- b. What maintenance and testing of hoist control system is done: Operational testing when using the hoist for lowering and raising the boat.
- c. Identify wire rope maintenance and lubrication processes: Visual inspection of cable for broken or displaced wires. Hoist has a single stainless steel cable which is hand greased using MIL-G-18458
- d. Identify the process for cleaning and preservation of handling gear: Fresh water wash and light lubrication with Brilube 30.

# USCG WPB Class Specific Process Appendix

## **Towing and Mooring Systems**

- a. How is wire rope maintained and preserved: Not applicable, Nylon Line is used.
- b. Identify any towing support hardware maintenance: Not applicable
- c. How are the mooring lines stowed, inspected and maintained: Lines are stowed in the line locker or flaked over the safety rail while in port for drying. Visually inspected after each use and replaced as required.
- d. Is any maintenance performed on the mooring capstan assembly: Not applicable, capstan equipment is located below decks.
- e. What type of capstan control system is used: Electrical

# USCG WPB Class Specific Process Appendix

## Weapon Systems

- a. Identify all weapon systems on weather deck: 2- 50 caliber M2 HP Machine Guns, and 1- Mk 38 25mm Machine Gun (Forecastle).
- b. What maintenance is done on identified systems: Maintenance on the weapon systems is cleaning and preservation of systems and scheduled maintenance IAW Maintenance Procedure Cards (MPCs).
- c. What type of cleaning and what materials are used: Guns are wiped down with fresh water and Simple Green. A light coating of CLP NSN 9750-01-053-6688 or ARMOR-KOTE P/N 209-108-065 is put on the guns for preservation. Other materials used during maintenance actions are; corrosion compound NSN 5030-00-272-8530, Oil VV-L-8000 NSN 9750-00-458-0075 and Oil NSN 9750-00-292-9689.
- d. Identify any recurring problems leading to weather deck pollution potential:  
None

# USCG WPB Class Specific Process Appendix

## **Deck Washdown**

- a. Identify all cleaning agents used: Simple Green detergent or a commercial product Blue AIP, purchased from Buckeye International Inc..
- b. What is done with the waste removed from the deck by process above: Direct overboard discharge.
- c. Is the fire main used for washdowns of the deck, indicate water pressure and flow rates: Underway washdowns are conducted using seawater from the ships fire main. The fire main produces 120 psi at 95 gpm,. An underway washdown evolution lasts approximately 2-3 hours and the detergents identified above are used during the process.
- d. Is fresh water hose-down of deck surface performed, and identify pressure and flow rates: Fresh water washdowns are performed in port only using a ¾" garden hose at 40-50 psi with a flow rate of 10gpm. This evolution lasts approximately 8 hours of which the water is running an estimated 3 hours with a total use of 1,800-2,000 gallons of fresh water. No detergents are used with fresh water washdowns in port.



Nylon Zip-Down Covers  
Installed Over Fuel Transfer Stations

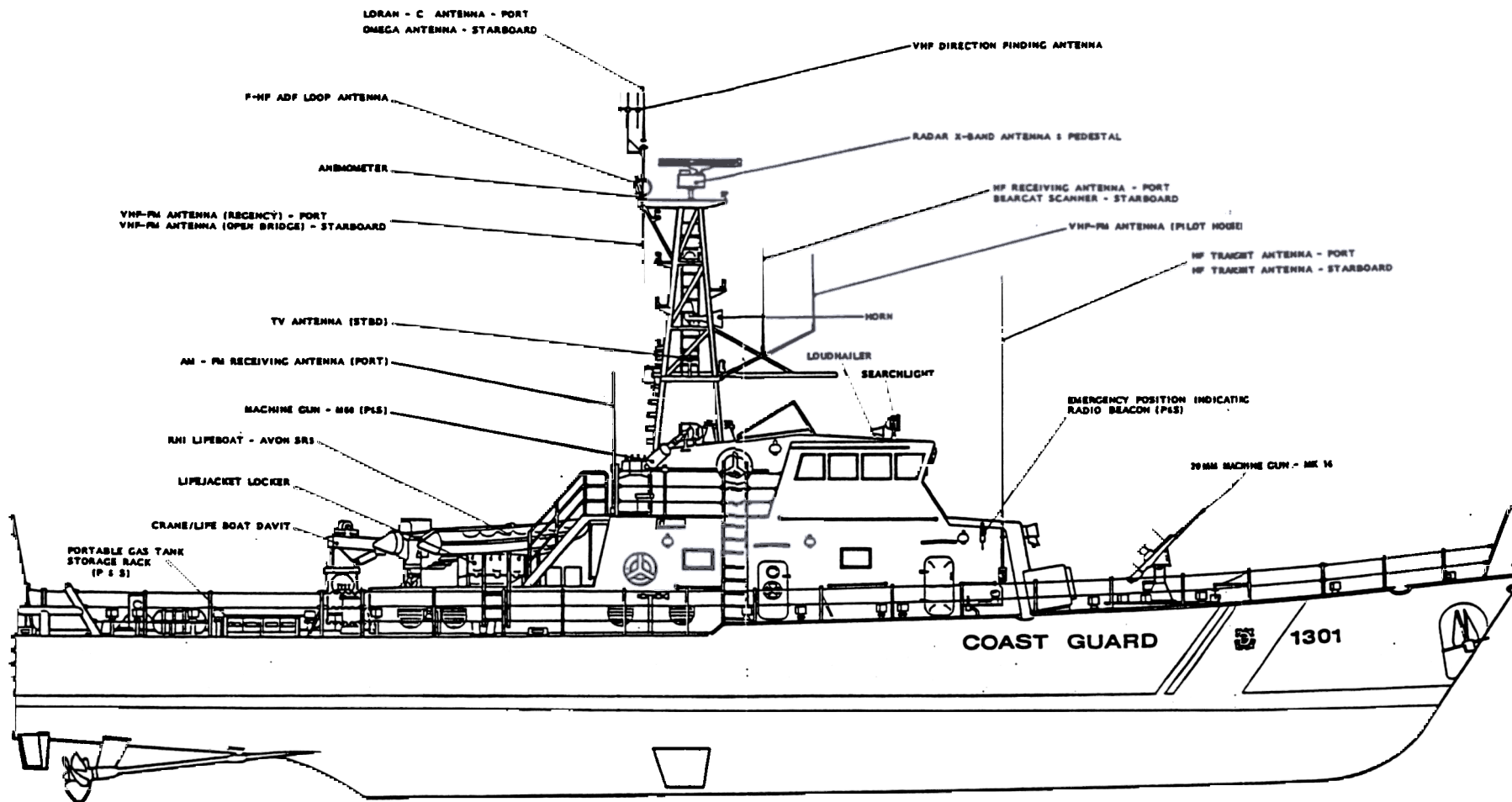


Nylon Cover Installed on Rigid Hulled Inflatable Boat



Nylon Cover Installed on Machine Gun

H-1



110 FOOT FAST PATROL BOAT - PROFILE

# **Material Safety Data Sheets**

SELIG CHEMICAL INDUSTRIES -- NEW & IMPROVED BRITE CREME, 2008  
MATERIAL SAFETY DATA SHEET  
NSN: 793000N033235  
Manufacturer's CAGE: 86938  
Part No. Indicator: A  
Part Number/Trade Name: NEW & IMPROVED BRITE CREME, 2008

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General Information

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Company's Name: SELIG CHEMICAL INDUSTRIES  
Company's Street: 840 SELIG DR SW  
Company's City: ATLANTA  
Company's State: GA  
Company's Country: US  
Company's Zip Code: 30378  
Company's Emerg Ph #: 202-483-7616; 800-424-9300 (CHEMTREC)  
Company's Info Ph #: 404-691-9220  
Record No. For Safety Entry: 001  
Tot Safety Entries This Stk#: 001  
Status: SMJ  
Date MSDS Prepared: 16JAN89  
Safety Data Review Date: 21AUG92  
MSDS Serial Number: BPVVF  
Hazard Characteristic Code: NK

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Ingredients/Identity Information

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Proprietary: NO  
Ingredient: OXALIC ACID, DIAMMONIUM SALT; (AMMONIUM OXALATE) (SARA III)  
Ingredient Sequence Number: 01  
Percent: 1.3  
NIOSH (RTECS) Number: RO2750000  
CAS Number: 1113-38-8  
OSHA PEL: NOT APPLICABLE  
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO  
Ingredient: AMMONIUM HYDROXIDE; (AQUA AMMONIA)  
Ingredient Sequence Number: 02  
Percent: >1  
NIOSH (RTECS) Number: BQ9625000  
CAS Number: 1336-21-6  
OSHA PEL: NOT APPLICABLE  
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO  
Ingredient: 2-BIPHENYLOL (SARA III)  
Ingredient Sequence Number: 03  
Percent: >1  
NIOSH (RTECS) Number: DV5775000  
CAS Number: 90-43-7  
OSHA PEL: NOT APPLICABLE  
ACGIH TLV: NOT APPLICABLE

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Physical/Chemical Characteristics

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Appearance And Odor: GREEN PASTE WITH SASSAFRAS ODOR  
Boiling Point: 212F, 100C  
Vapor Pressure (MM Hg/70 F): AS WATER  
Vapor Density (Air=1): AS WATER  
Specific Gravity: 1.2  
Evaporation Rate And Ref: 1 (WATER=1)  
Solubility In Water: 72%

Percent Volatiles By Volume: 51  
pH: 9.3

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Fire and Explosion Hazard Data

=====

Flash Point: NONE  
Extinguishing Media: USE MEDIA SUITABLE FOR SURROUNDING FIRE (FP N).  
Special Fire Fighting Proc: WEAR NIOSH/MSHA APPROVED SCBA & FULL  
PROTECTIVE EQUIPMENT (FP N).  
Unusual Fire And Expl Hazrds: NOT APPLICABLE.

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Reactivity Data

=====

Stability: YES  
Cond To Avoid (Stability): NONE SPECIFIED BY MANUFACTURER.  
Materials To Avoid: ACIDS, OXIDIZERS.  
Hazardous Decomp Products: CO, AMMONIA, AMINES.  
Hazardous Poly Occur: NO  
Conditions To Avoid (Poly): NOT RELEVANT.

=====

Health Hazard Data

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LD50-LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.  
Route Of Entry - Inhalation: NO  
Route Of Entry - Skin: NO  
Route Of Entry - Ingestion: YES  
Health Haz Acute And Chronic: SKIN:CAN BE SLIGHTLY IRRITATING UPON  
PROLONGED CONTACT. EYE:CAN BE IRRITATING UPON CONTACT. INGEST:MAY CAUSE  
SEVERE GASTRIC DISTRESS AND TOXIC REACTION. INHAL: NONE.  
Carcinogenicity - NTP: NO  
Carcinogenicity - IARC: NO  
Carcinogenicity - OSHA: NO  
Explanation Carcinogenicity: NOT RELEVANT.  
Signs/Symptoms Of Overexp: SEE HEALTH HAZARDS.  
Med Cond Aggravated By Exp: NONE SPECIFIED BY MANUFACTURER.  
Emergency/First Aid Proc: SKIN:WASH WITH SOAP & WATER. EYE:FLUSH  
IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. INHAL:MOVE TO  
FRESH AIR. SUPPORT BREATHING (GIVE O\*2/ARTF RESP) (FP N). INGEST:RINSE  
MOUTH & GIVE PLENTY OF WATER TO DRINK. INDUCE VOMITING. GET MD IMMEDIATELY.

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Precautions for Safe Handling and Use

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Steps If Matl Released/Spill: PICK UP EXCESS. THEN MOP UP WITH WATER.  
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.  
Waste Disposal Method: CHECK LOCAL, STATE AND FEDERAL REGULATIONS PRIOR TO  
DISPOSAL. PRODUCT IS NOT CONSIDERED A HAZARDOUS WASTE UNDER RCRA. LIQUIDS  
MAY BE ABLE TO BE DISPOSED OF BY FLUSHING INTO SANITARY SEWER WITH PLENTY  
OF WATER. NEUTRALIZATION OF PH MAY BE REQUIRED.  
Precautions-Handling/Storing: STORE BETWEEN 35-110F.  
Other Precautions: KEEP OUT OF REACH OF CHILDREN. HARMFUL IF SWALLOWED.  
AVOID EYE CONTACT.

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Control Measures

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Respiratory Protection: NOT REQUIRED. NIOSH/MSHA APPROVED RESPIRATOR  
APPROPRIATE FOR EXPOSURE OF CONCERN (FP N).  
Ventilation: NO SPECIAL VENTILATION REQUIRED.  
Protective Gloves: IMPERVIOUS GLOVES (FP N).  
Eye Protection: CHEMICAL WORKERS GOGGLES (FP N).  
Other Protective Equipment: PROTECTIVE CLOTHING NOT NORMALLY NECESSARY.  
Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.  
Suppl. Safety & Health Data: NONE SPECIFIED BY MANUFACTURER.

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Transportation Data

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=====  
Trans Data Review Date: 93041  
DOT PSN Code: ZZZ  
DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
IMO PSN Code: ZZZ  
IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION  
IATA PSN Code: ZZZ  
IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
AFI PSN Code: ZZZ  
AFI Prop. Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
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=====  
Disposal Data  
=====

=====  
Label Data  
=====

Label Required: YES  
Technical Review Date: 21AUG92  
Label Status: G  
Common Name: NEW & IMPROVED BRITE CREME, 2008  
Chronic Hazard: NO  
Signal Word: WARNING!  
Acute Health Hazard-Moderate: X  
Contact Hazard-Moderate: X  
Fire Hazard-None: X  
Reactivity Hazard-None: X  
Special Hazard Precautions: STORE BETWEEN 35-110F. ACUTE: SKIN: CAN BE SLIGHTLY IRRITATING UPON PROLONGED CONTACT. EYE: CAN BE IRRITATING UPON CONTACT. INGEST: MAY CAUSE SEVERE GASTRIC DISTRESS AND TOXIC REACTION. INHAL: NONE. CHRONIC: NONE LISTED BY MANUFACTURER.  
Protect Eye: Y  
Protect Skin: Y  
Protect Respiratory: Y  
Label Name: SELIG CHEMICAL INDUSTRIES  
Label Street: 840 SELIG DR SW  
Label City: ATLANTA  
Label State: GA  
Label Zip Code: 30378  
Label Country: US  
Label Emergency Number: 202-483-7616;800-424-9300 (CHEMTREC)

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**SHML Data**

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This NIIN is not currently found on the SHML; it requires CO's approval prior to procurement. If procured, submit SHML feedback form to Type Commander for endorsement prior to NAVICP approval.

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**Nuclear Water Data**

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This is not a Nuclear Water Chemical NIIN.

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**Standard PMS Identification Number Data**

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This is not a Standard PMS Identification Number NIIN.

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**MSDS Safety Information**

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**FSC:** 8010      **MSDS Date:** 07/19/1996      **MSDS Num:** CHCMG  
**Submitter:** N EN      **LIIN:** 00N085270      **Tech Review:** 04/27/1998      **Status CD:** C  
**Product:** INTERLAC 800 LIGHT BASE, 80011      **MFN:** 01  
**ID:**  
**Article:** N      **Kit Part:** N  
    **Responsible Party**      **Cage:** 26351  
    **Name:** INTERNATIONAL PAINT CO INC  
**Address:** 2270 MORRIS AVE  
    **City:** UNION      **State:** NJ      **Zip:** 07083-0386  
    **Country:** US  
**Info Phone Number:** 713-682-1711  
**Emergency Phone Number:** 800-854-6813  
    **Preparer's Name:** N/P  
    **Proprietary Ind:** N      **Review Ind:** N  
    **Published:** Y      **Special Project CD:** N

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**Contractor Summary**

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**Cage:** 26351      **Name:** INTERNATIONAL PAINT INC  
**Address:** 6001 ANTOINE DR  
    **City:** HOUSTON      **State:** TX      **Zip:** 77091  
    **Country:** US      **Phone:** 800-854-6813

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**Ingredients**

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**Cas:** 1330-20-7      **Code:** M      **RTECS #:** ZE2100000      **Code:** M  
**Name:** XYLENE (SARA 313) (CERCLA). VP: 10.0 @ 20C  
**% Text:** 1-5      **Environmental Wt:**  
    **Other REC Limits:** N/K

OSHA PEL: 100 PPM	Code: M	OSHA STEL:	Code:
ACGIH TLV: 100 PPM/150STEL;9495	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty: 1000 LBS		DOT Rpt 1000 LBS Qty:	

Ozone Depleting Chemical: N

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Cas: 110-12-3	Code: M	RTECS #: MP3850000	Code: M
Name: 2-HEXANONE, 5-METHYL-; (METHYL ISOAMYL KETONE). VP: 4.0 @ 20C			
% Text: 10-15		Environmental Wt:	
		Other REC Limits: N/K	
OSHA PEL: 100 PPM	Code: M	OSHA STEL:	Code:
ACGIH TLV: 50 PPM; 9495	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty:		DOT Rpt Qty:	

Ozone Depleting Chemical: N

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Cas: 110-43-0	Code: M	RTECS #: MJ5075000	Code: M
Name: 2-HEPTANONE; (METHYL N-AMYL KETONE). VP: 2.1 @ 20C			
% Text: 5-10		Environmental Wt:	
		Other REC Limits: N/K	
OSHA PEL: 100 PPM	Code: M	OSHA STEL:	Code:
ACGIH TLV: 50 PPM; 9495	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty:		DOT Rpt Qty:	

Ozone Depleting Chemical: N

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#### Health Hazards Data

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LD50 LC50 Mixture NONE SPECIFIED BY MANUFACTURER.

Route Of Entry Inds - Inhalation: YES	Skin: YES	Ingestion: NO
Carcinogenicity Inds - NTP: NO	IARC: NO	OSHA: NO

**Health Hazards Acute And Chronic**

ACUTE: EYES: CAN CAUSE IRRITATION WITH REDNESS, TEARING AND BLURRED VISION. SKIN: IRRITATING. MAY RESULT IN DERMATITIS. INHALATION: IRRITATION OF RESPIRATORY TRACT. HEADACHE AND DIZZINESS AND UNCONSCIOUSNESS. INGESTION: MAY CAUSE GASTRO-INT ESTINAL IRRITAION. CHRONIC: OVEREXPOSURE TO, AND MISUSE OF, (EFTS OF OVEREXP)

**Explanation Of Carcinogenicity**

NOT RELEVANT.

**Signs And Symptions Of Overexposure**

HLTH HAZ: SOLVENTS HAS BEEN LINKED TO PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.

**Medical Cond Aggravated By Exposure**

SKIN AND RESPIRATORY CONDITIONS.

**First Aid**

EYES: FLUSH IMMEDIATELY WITH COPIOUS QUANTITIES OF H<sub>2</sub>O FOR AT LEAST 15 MIN. GET MEDICAL ATTENTION IMMEDIATELY. SKIN: REMOVE CONTAMINATED CLOTHING, WASH SKIN WITH PLENTY OF SOAP & H<sub>2</sub>O. LAUNDER CLOTHES BEFORE REUSE. GET IMMEDIATE MEDICAL ATTENTION. GET MEDICAL ATTENTION IF IRRITATION OCCURS. INHALATION: REMOVE AND GIVE ARTIFICIAL RESPIRATION IF NEEDED. GET MEDICAL ATTENTION. INGESTION: CALL A PHYSICIAN IMMEDIATELY TO DETERMINE WHETHER OR NOT TO INDUCE VOMITING.

**Spill Release Procedures**

REMOVE ALL SOURCES OF IGNITION. AVOID INHALATION OF VAPORS. VENTILATE AREA. CLEAN UP WITH ABSORBENT MATERIALS.

**Neutralizing Agent**

NONE SPECIFIED BY MANUFACTURER.

**Waste Disposal Methods**

DISPOSE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE UNOPENED CONTAINERS.

**Handling And Storage Precautions**

STORE IN BUILDING DESIGNED AND PROTECTED FOR STORAGE OF LIQUIDS WITH NFPA CLASS GIVEN BY OSHA CLASS IN SECTION 4.

**Other Precautions**

AVOID BREATHING DUST OR CHIPS FROM SANDING OR BLASTING SURFACES COATED WITH THIS PRODUCT.

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**Fire and Explosion Hazard Information**

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**Flash Point Method:** SCC

**Flash Point:**

**Flash Point Text:** 96.0F, 35.6C

**Autoignition Temp:**

**Autoignition Temp Text:** N/A

**Lower Limits:** N/K

**Upper Limits:** N/K

**Extinguishing Media**

FOAM, CO<sub>2</sub>, DRY CHEMICAL.

**Fire Fighting Procedures**

USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (PPE). SMOTHER FLAMES WITH ONE OF THE ABOVE EXTINGUISHING MEDIA. H<sub>2</sub>O MAY BE USED TO COOL UNOPENED CONTAINERS, BUT MUST BE USED CAREFULLY.

**Unusual Fire/Explosion Hazard**

CONTAINS FLAMMABLE SOLVENT. DO NOT USE IN AREAS WHERE SPARK OR OPEN FLAME ARE PRESENT. CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

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**Control Measures**

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**Respiratory Protection**

IN OUTDOOR/OPEN AREAS, WITH UNRESTRICTED VENT, USE A NIOSH APPROVED FILTER RESPIRATOR TO REMOVE SOLID AIR-BORNE PARTICLES OF OVERSPRAY DURING SPRAY APPLICATION. IN RESTRICTED VENT AREAS, USE A NIOSH APPROVED RESPIRATOR I/A/W/29 CFR 1910.134 TO (SUPDAT)

**Ventilation**

PROVIDE SUFFICIENT VENT, IN VOLUME & PATTERN, TO KEEP TLV & LEL OF HAZARDOUS INGREDIENTS BELOW LIMITS SPECIFIED IN INGREDIENTS (SUPDAT)

**Protective Gloves**

CHEMICAL RESISTANT GLOVES.

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**Ecological Information**

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**Ecological:** N/P

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**MSDS Transport Information**

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**Transport Information:** N/P

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**Regulatory Information**

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**Sara Title III Information:** N/P**Federal Regulatory Information:** N/P**State Regulatory Information:** N/P

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**Other Information**

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**Other N/P  
Information:**

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**HMIS HAZCOM Label**

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Print Labels**Product ID:** INTERLAC 800 LIGHT BASE, 80011**Cage:** 26351**Assigned IND:** N**Company Name:** INTERNATIONAL PAINT INC**Street:** 6001 ANTOINE DR**City:** HOUSTON**State:** TX**PO Box:****Zipcode:** 77091**Country:** US**Health Emergency Phone:** 800-854-6813**Label Required IND:** Y**Status Code:** C**Label Date:** 04/27/1998**Origination Code:** M**Eye Protection IND:** YES**Signal Word:** DANGER**Health Hazard:** Moderate**Contact Hazard:** Slight**Fire Hazard:** Severe**Reactivity Hazard:** None**Date Of Label Review:** 04/27/1998**MFG Label NO:****Year Procured:** N/K**Chronic Hazard IND:** Y**Skin Protection IND:** YES**Respiratory Protection IND:** YES

**Hazard And Precautions**

FLAMMABLE. ACUTE: EYES: CAN CAUSE IRRITATION WITH REDNESS, TEARING AND BLURRED VISION. SKIN: IRRITATING. MAY RESULT IN DERMATITIS. INHALATION: IRRITATION OF RESPIRATORY TRACT. HEADACHE AND DIZZINESS AND UNCONSCIOUSNESS. INGESTION: MAY CAUSE GASTRO-INTESTINAL IRRITATION. CHRONIC: OVEREXPOSURE TO, AND MISUSE OF, SOLVENTS HAS BEEN LINKED TO PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.

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**HMIS Sponsored by**

DEFENSE SUPPLY CENTER BIRMINGHAM

MATERIAL SAFETY DATA SHEET

Product Description:  
Manufacturer's Code:

BRIGHTSIDE OCEAN BLUE  
Y4253

Revision Date 12/19/96  
Initial Issue Date 11/11/96

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Description BRIGHTSIDE OCEAN BLUE  
Product Description Continued

Manufacturer's Code: Y4253

Manufacturer:

Courtaulds Coatings Inc.  
International  
6001 Antoine Drive  
Houston, TX 77091

Courtaulds Coatings Inc.  
Interlux  
2270 Morris Avenue  
Union, NJ 07083-0386

WHMIS Classification:

Not Regulated

International Info 8AM-5PM CST: 713-684-1563  
Interlux Info 8AM-5PM EST: 908-964-2206  
Emergency Telephone Number: 800-854-6813  
CHEMTREC #: 800-424-9300

2. OSHA REPORTABLE HAZARDOUS COMPONENTS (20 CFR1910.1200)

Component	Wt %	CAS Registry #
Mineral Spirits	25-50	008052-41-3
Aliphatic Hydrocarbon	10-25	064742-47-8
ALIPHATIC PETROLEUM DISTILLATE	01-10	064742-88-7
Aromatic Hydrocarbon	01-10	064742-94-5
CYCLOALIPHATIC HYDROCARBON	01-10	PROPRIETRY8
KEROSINE	01-10	008008-20-6

EXPOSURE LIMITS (ppm)

# MATERIAL SAFETY DATA SHEET

Product Description:  
Manufacturer's Code:

BRIGHTSIDE OCEAN BLUE  
Y4253

Component	ACGIH TLVs		OSHA PELs		
	TWA	STEL	TWA	STEL	
Mineral Spirits	100	N/E	500	N/E	S
Aliphatic Hydrocarbon	N/E	N/E	N/E	N/E	
ALIPHATIC PETROLEUM DISTILLATE	100	100	100	100	S
Aromatic Hydrocarbon	N/E	N/E	100	N/E	R
CYCLOALIPHATIC HYDROCARBON	N/EST		N/EST		
KEROSINE	N/EST	N/EST	N/EST	N/EST	

(M) Maximum Exposure Limit

(S) Occupational Exposure Standard

(R) Supplier's Recommended Limit

(+) There is a risk of absorption through unbroken skin.

## 3. HAZARDS IDENTIFICATION

### INHALATION:

Causes nose and throat irritation.

Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea.

### EYE CONTACT:

Causes eye irritation.

### SKIN CONTACT:

Causes skin irritation.

### INGESTION:

Harmful if swallowed.

Contains an ingredient listed as known or suspected carcinogen?

NTP: No OSHA: No IARC: No

MATERIAL SAFETY DATA SHEET

Product Description:  
Manufacturer's Code:

BRIGHTSIDE OCEAN BLUE  
Y4253

4. FIRST AID MEASURES

GENERAL:

In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

INHALATION:

Remove to fresh air. If discomfort is present or breathing is absent get medical attention immediately.

EYE CONTACT:

Flush immediately with plenty of water for 15 minutes until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT:

Flush with large amounts of water. Use soap if available. Remove severely contaminated clothing (including shoes) and wash before reuse. If irritation persists, get medical attention.

INGESTION:

If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

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5. FIRE AND EXPLOSION DATA

Flashpoint: 100 F 37.774 C  
OSHA Classification: Combustible Liquid - Class II  
LEL: .5

FIRE AND EXPLOSION HAZARDS:

Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode when exposed to extreme heat. In the absence of electricity, a water spray (a fog nozzle is preferred) may be used to cool containers. Decomposition and combustion products may be toxic.

EXTINGUISHING MEDIA:

Foam, Carbon Dioxide, Dry Chemical

MATERIAL SAFETY DATA SHEET

Product Description:  
Manufacturer's Code:

BRIGHTSIDE OCEAN BLUE  
Y4253

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6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Absorb spill with an inert material (e.g., dry sand or earth), then place in a chemical waste container.

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7. HANDLING AND STORAGE

GENERAL:

Keep container closed. Loosen closure cautiously before opening. Store in a cool, well ventilated place away from incompatible materials. (See Stability and Reactivity Section 10.) Keep away from heat, sparks and flames. Protect material from direct sunlight. Ground and bond containers when transferring materials. Empty containers may retain hazardous properties. Follow all MSDS/label warnings, even after the container is emptied.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide sufficient ventilation, in volume and pattern, to:

- a) keep the TLV of the hazardous ingredients below the limits specified in Section Two.
- b) remove volatiles produced during cure and decomposition products produced during welding or cutting on surfaces coated with this product.

PERSONAL PROTECTION:

RESPIRATOR:

Do not breathe vapors or spray mist. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacture's directions for respirator use.

MATERIAL SAFETY DATA SHEET

Product Description:

BRIGHTSIDE OCEAN BLUE

Manufacturer's Code:

Y4253

PROTECTIVE EQUIPMENT:

CLOTHING: As needed, use body protection to avoid contact with product.

EYE: Safety glasses, chemical goggles and/or a face shield should be worn to prevent eye contact.

GLOVES: Wear chemical resistant gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity: .949  
Boiling Point: 300 F 148.874 C  
Physical State: liquid  
Evaporation Rate: Slower/ether  
Vapour Density: Heavier than air

10. STABILITY AND REACTIVITY

GENERAL:

This product is stable and hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong oxidizing agents.

HAZARDOUS DECOMPOSITION:

May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

MATERIAL SAFETY DATA SHEET

Product Description:  
Manufacturer's Code:

BRIGHTSIDE OCEAN BLUE  
Y4253

11. TOXICOLOGICAL INFORMATION

There is no data available on the product itself.  
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

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12. ECOLOGICAL INFORMATION

There is no data available on the product itself.

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13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations.  
Do not incinerate unopened containers.

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14. TRANSPORT INFORMATION

DOT (Department of Transportation):  
Proper Shipping Name: Paint  
Packing Group: Not Regulated

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15. REGULATORY INFORMATION

TSCA (Toxic Substance Control Act):  
Components of this product are listed on the TSCA Inventory.

CERCLA (Comprehensive Response Compensation, and Liability Act):  
We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III (Superfund Amendments and Reauthorization Act):

MATERIAL SAFETY DATA SHEET

Product Description: BRIGHTSIDE OCEAN BLUE  
Manufacturer's Code: Y4253

None known unless chemicals are specified below.

Section 302 Reportable Ingredients

313 Reportable Ingredients

CALIFORNIA PROPOSITION 65:

None known unless specified below

Warning: This product contains a chemical known to the State of California to cause cancer.

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16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End of Document

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**SHML Data**

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**Item Status:** AUTHORIZED FOR SHIPBOARD USE  
**SHML FSC:** 7930 **SHML** 013424145  
**NIIN:**  
**Obsolete NIIN:** N **Replaced By NSN:** <blank>  
**Nomenclature:** CLEANING COMPOUND,S  
**COG:** 9Q - Tech Command, Various; Inventory Control Point, GSA  
**Acquisition Advice Code:** I  
**Special MAT'L Content Code:** 5 - Hazardous Material (non-specific), item's unique formulations may produce different hazard classes. Consult item's Material Safety Data Sheet (MSDS) or container warning label.  
**Special MAT'L IDENT. Code:** <blank>  
**SHML Unit of Issue:** DR - Drum (Non-definitive **Unit Of Measure:** 55 GL  
Unit of Issue)  
**Quantity Per Unit Package:** 1  
**Shelf Life:** 0 {Non-Deteriorative (Type II Extendable)}  
**Shelf Life Action Code:** 00 - Not deteriorative. (Must always be shown when field "ShelfLife" is "0".)  
**Type Of Storage:** A - General Purpose, Unheated  
**Specification:** SIMPLE GREEN 13008  
**SPMIG:** <blank>  
**Remarks:** EQUIVALENTS 013068369(6-1GL),013425315(12-24OZ),  
013425316(5GL), 013425317(15GL)pH 9.5, VOC 7.96 g/L

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**Nuclear Water Data**

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This is not a Nuclear Water Chemical NIIN.

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**Standard PMS Identification Number Data**

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This is not a Standard PMS Identification Number NIIN.

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**MSDS Safety Information**

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**FSC:** 7930 **NIIN:** 01-342-4145 **MSDS Date:** 03/25/1991 **MSDS Num:** BLMXQ  
**Submitter:** N EN **Tech Review:** 10/06/1993 **Status CD:** C  
**Product** SIMPLE GREEN **MFN:** 01  
**ID:**  
**Article:** N **Kit Part:** N  
**Responsible Party** **Cage:** IO907  
**Name:** SUNSHINE MAKERS INC  
**Address:** 15922 PACIFIC COAST HIGHWAY  
**City:** HUNTINGTON HARBOR **State:** CA **Zip:** 92649  
**Country:** US  
**Info Phone Number:** 800-228-0709

Emergency Phone Number: 800-228-0709

Preparer's Name: N/P

Proprietary Ind: N

Review Ind: N

Published: Y

Special Project CD: N

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**Contractor Summary**

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Cage: I0907      Name: SUNSHINE MAKERS INC  
Address: 15922 PACIFIC COAST HIGHWAY      Box: N/K  
City: HUNTINGTON HARBOUR      State: CA      Zip: 92649  
Country: US      Phone: 310-795-6000

Cage: 1Z575      Name: SUNSHINE MAKERS, INC R&D DIV  
Address: 15922 PACIFIC COAST HIGHWAY  
City: HUNTINGTON HARBOUR      State: CA      Zip: 92649  
Country: US      Phone: 800-228-0709

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**Item Description Information**

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Item Manager: GSA  
Item Name: CLEANING COMPOUND, SOLVENT-DETERGENT  
Specification Number: N/K      Type/Grade/Class: N/K  
Unit of Issue: DR      Quantitative Expression: 00000000055GL  
UI Container Qty: 55 GL DR      Type of Container: METAL

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**Ingredients**

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Cas: 7732-18-5      Code: M      RTECS #: ZC0110000      Code: M  
Name: WATER  
% Text: N/K  
Environmental Wt:  
Other REC Limits: N/K  
OSHA PEL: NOT APPLICABLE      Code: M      OSHA      Code:  
STEL:      Code:  
ACGIH TLV: NOT APPLICABLE      Code: M      ACGIH N/P  
STEL:      Code:  
EPA Rpt Qty:      DOT Rpt  
Qty:  
Ozone Depleting Chemical: N

Cas:      Code: X      RTECS #: 1001310SA      Code: M  
Name: SURFACTANTS  
% Text: N/K  
Environmental Wt:  
Other REC Limits: N/K  
OSHA PEL: NOT APPLICABLE      Code: M      OSHA      Code:  
STEL:      Code:  
ACGIH TLV: NOT APPLICABLE      Code: M      ACGIH N/P  
STEL:      Code:  
EPA Rpt Qty:      DOT Rpt  
Qty:  
Ozone Depleting Chemical:

<b>Cas:</b>	<b>Code: X</b>	<b>RTECS #:</b> 1000366WA	<b>Code: M</b>
<b>Name:</b> WETTING AGENTS			
<b>% Text:</b> N/K		<b>Environmental Wt:</b>	
		<b>Other REC Limits:</b> N/K	
OSHA PEL: NOT APPLICABLE	<b>Code: M</b>	OSHA	<b>Code:</b>
ACGIH TLV: NOT APPLICABLE	<b>Code: M</b>	STEL:	
		ACGIH N/P	<b>Code:</b>
		STEL:	
EPA Rpt Qty:		DOT Rpt	
		Qty:	
<b>Ozone Depleting Chemical:</b>			

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<b>Cas:</b>	<b>Code: X</b>	<b>RTECS #:</b> 1000586CA	<b>Code: M</b>
<b>Name:</b> CHELATING AGENT			
<b>% Text:</b> N/K		<b>Environmental Wt:</b>	
		<b>Other REC Limits:</b> N/K	
OSHA PEL: NOT APPLICABLE	<b>Code: M</b>	OSHA	<b>Code:</b>
ACGIH TLV: NOT APPLICABLE	<b>Code: M</b>	STEL:	
		ACGIH N/P	<b>Code:</b>
		STEL:	
EPA Rpt Qty:		DOT Rpt	
		Qty:	
<b>Ozone Depleting Chemical:</b>			

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<b>Cas:</b>	<b>Code: X</b>	<b>RTECS #:</b> 1002064FR	<b>Code: M</b>
<b>Name:</b> FRAGRANCE			
<b>% Text:</b> N/K		<b>Environmental Wt:</b>	
		<b>Other REC Limits:</b> N/K	
OSHA PEL: NOT APPLICABLE	<b>Code: M</b>	OSHA	<b>Code:</b>
ACGIH TLV: NOT APPLICABLE	<b>Code: M</b>	STEL:	
		ACGIH N/P	<b>Code:</b>
		STEL:	
EPA Rpt Qty:		DOT Rpt	
		Qty:	
<b>Ozone Depleting Chemical:</b>			

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<b>Cas:</b>	<b>Code: X</b>	<b>RTECS #:</b> 1001827CO	<b>Code: M</b>
<b>Name:</b> COLORANT			
<b>% Text:</b> N/K		<b>Environmental Wt:</b>	
		<b>Other REC Limits:</b> N/K	
OSHA PEL: NOT APPLICABLE	<b>Code: M</b>	OSHA	<b>Code:</b>
ACGIH TLV: NOT APPLICABLE	<b>Code: M</b>	STEL:	
		ACGIH N/P	<b>Code:</b>
		STEL:	
EPA Rpt Qty:		DOT Rpt	
		Qty:	
<b>Ozone Depleting Chemical:</b>			

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<b>Cas:</b> 111-76-2	<b>Code: M</b>	<b>RTECS #:</b> KJ8575000	<b>Code: M</b>
<b>Name:</b> 2-BUTOXYETHANOL			
<b>% Text:</b> <2.0		<b>Environmental Wt:</b>	
		<b>Other REC Limits:</b> N/K	

OSHA PEL: S, 50 PPM	Code: M	OSHA STEL:	Code:
ACGIH TLV: S, 25 PPM; 9293	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty:		DOT Rpt Qty:	

Ozone Depleting Chemical: N

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Cas:	Code: X	RTECS #: 9999999ZZ	Code: M
Name: SUP DAT:ADVERSE EFFECTS ON THE CNS,BLOOD-FORMING TISSUE,BLOOD, KIDNEYS & LIVER, ASSOCIATED W/THE ADMINISTRATION (ING 9)			
% Text: N/A		Environmental Wt:	
		Other REC Limits: NOT APPLICABLE	
OSHA PEL: NOT APPLICABLE	Code: M	OSHA STEL:	Code:
ACGIH TLV: NOT APPLICABLE	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty:		DOT Rpt Qty:	

Ozone Depleting Chemical:

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Cas:	Code: X	RTECS #: 9999999ZZ	Code: M
Name: ING 8:OF ETHYLENE GLYCOL MONOBUTYL ETHER (EGBE) & ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE (EGBEA). (EXTRACTED (ING 10)			
% Text: N/A		Environmental Wt:	
		Other REC Limits: NOT APPLICABLE	
OSHA PEL: NOT APPLICABLE	Code: M	OSHA STEL:	Code:
ACGIH TLV: NOT APPLICABLE	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty:		DOT Rpt Qty:	

Ozone Depleting Chemical:

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Cas:	Code: X	RTECS #: 9999999ZZ	Code: M
Name: ING 9: FROM DHHS (NIOSH) PUBLICATION NO. (90-118). (FP N)			
% Text: N/A		Environmental Wt:	
		Other REC Limits: NOT APPLICABLE	
OSHA PEL: NOT APPLICABLE	Code: M	OSHA STEL:	Code:
ACGIH TLV: NOT APPLICABLE	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty:		DOT Rpt Qty:	

Ozone Depleting Chemical:

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**Health Hazards Data**

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LD50 LC50 Mixture LD50: (ORAL,RAT) >5.0 G/KG.		
Route Of Entry Inds - Inhalation: YES	Skin: YES	Ingestion: YES
Carcinogenicity Inds - NTP:NO	IARC: NO	OSHA:NO

**Health Hazards Acute And Chronic**

ADVERSE EFFECTS ON HUMAN HEALTH ARE NOT EXPECTED FROM SIMPLE GREEN, BASED UPON SEVENTEEN YEARS OF USE WITHOUT REPORTED ADVERSE HEALTH INCIDENCE IN DIVERSE POPULATION GROUPS, INCLUDING EXTENSIVE USE BY INMATES OF U.S. FEDERAL PRISONS IN CLEANUP OPERATIONS. SIMPLE GREEN IS MILD EYE IRRITANT; MUCOUS (SEE EFFECTS OF OVEREXPOSURE)

**Explanation Of Carcinogenicity**

NOT RELEVANT.

**Signs And Symptoms Of Overexposure**

HEALTH HAZ: MEMBRANES MAY BECOME IRRITATED BY CONCENTRATE-MIST. SIMPLE GREEN IS NOT LIKELY TO IRRITATE SKIN IN MAJORITY OF USERS. REPEATED DAILY APPLICATION TO SKIN WITHOUT RINSING, OR CONTINUOUS CONTACT OF SIMPLE GREEN ON SKIN MAY LEAD TO TEMPORARY, BUT REVERSIBLE, IRRITATION.

**Medical Condition Aggravated By Exposure**

NONE SPECIFIED BY MANUFACTURER.

**First Aid**

EYE: IMMEDIATELY RINSE EYE WITH LARGE QUANTITIES OF COOL WATER; CONTINUE 15 MINUTES UNTIL MATERIAL HAS BEEN REMOVED; BE SURE TO LIFT UPPER & LOWER LIDS DURING RINSING. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. SKIN: MINOR EFFECTS, IF ANY; RINSE SKIN WITH WATER, RINSE SHOES & LAUNDRY CLOTHING BEFORE REUSE. REVERSIBLE REDDENING MAY OCCUR IN SOME DERMAL-SENSITIVE USERS; THOROUGHLY RINSE AREA & GET MEDICAL ATTENTION IF REACTION PERSISTS. INGESTION: ESSENTIALLY (SEE SUPPORT DATA)

**Spill Release Procedures**

VACUUM, SWEEP, SCOOP, OR MOP UP SPILLED MATERIAL; WET CLEAN-UP METHODS ARE SUITABLE.

**Neutralizing Agent**

NONE SPECIFIED BY MANUFACTURER.

**Waste Disposal Methods**

SIMPLE GREEN IS FULLY WATER SOLUBLE AND BIODEGRADABLE & WILL NOT HARM SEWAGE-TREATMENT MICROORGANISMS IF DISPOSED BY SEWER OR DRAIN. DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS.

**Handling And Storage Precautions**

NO SPECIAL PRECAUTIONS REQUIRED. THIS PRODUCT IS NON-HAZARDOUS.

**Other Precautions**

NONE SPECIFIED BY MANUFACTURER.

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**Fire and Explosion Hazard Information**

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**Flash Point Method:** N/P

**Flash Point:**

**Flash Point Text:** N/K

**Autoignition Temp:**

**Autoignition Temp Text:** N/A

**Lower Limits:** N/K

**Upper Limits:** N/K

**Extinguishing Media**

NONFLAMMABLE/NONEXPLOSIVE. NO SPECIAL PROCEDURES REQUIRED.

**Fire Fighting Procedures**

NONE REQUIRED.

**Unusual Fire/Explosion Hazard**

NONE REQUIRED.

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**Control Measures**

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**Respiratory Protection**

NO SPECIAL PRECAUTIONS REQUIRED.

**Ventilation**

NONE SPECIFIED BY MANUFACTURER.

**Protective Gloves**

NONE SPECIFIED BY MANUFACTURER.

**Eye Protection**

CHEMICAL WORKERS GOGGLES (FP N).

**Other Protective Equipment**

NONE SPECIFIED BY MANUFACTURER.

**Work Hygienic Practices**

RINSE COMPLETELY FROM SKIN AFTER CONTACT.

**Supplemental Safety and Health**FIRST AID: NON-TOXIC.GIVE SEVERAL GLASSES OF H<sub>2</sub>O TO DILUTE;DO NOT INDUCE VOMIT.IF STOMACH UPSET OCCURS, CONSULT MD.

INHAL:NON=TOXIC.EXPOS TO CONCENTRATE-MIST MAY CAUSE MILD IRRIT OF NASAL PASSAGES/THROAT;REMOVE TO FRESH AIR. GET MED ATTN IF IRRIT PERSISS. ANIMAL STUDIES HAVE CLEARLY DEMONSTRATED DOSE-RELATED (ING 8)

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**Physical/Chemical Properties**

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HCC: N1

NRC/State LIC No:

Net Prop WT For Ammo:

Boiling Point:

B.P. Text: 230F,110C

Melt/Freeze Pt:

M.P/F.P Text: N/K

Decomp Temp:

Decomp Text: N/K

Vapor Pres: 30

Vapor Density: 1.3

Volatile Org Content %:

Spec Gravity: 1.0257

VOC Pounds/Gallon:

PH: 9.5

VOC Grams/Liter:

Viscosity: N/P

Evaporation Rate &amp; Reference: N/K

Solubility in Water: COMPLETE

Appearance and Odor: TRANSPARENT GREEN LIQUID WITH CHARACTERISTIC SASSAFRAS ODOR.

Percent Volatiles by Volume: N/K

Corrosion Rate: N/K

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**Reactivity Data**

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T

Stability Indicator: YES NONE SPECIFIED BY MANUFACTURER.

Stability Condition To Avoid: NONE SPECIFIED BY MANUFACTURER.

Materials To Avoid:

Hazardous Decomposition Products: NONE SPECIFIED BY MANUFACTURER.

**Hazardous Polymerization NO****Indicator:****Conditions To Avoid NOT RELEVANT.****Polymerization:**

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**Toxicological Information**

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**T****Toxicological Information: N/P**

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**Ecological Information**

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**T****Ecological: N/P**

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**MSDS Transport Information**

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**T****Transport Information: N/P**

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**Regulatory Information**

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**T****Sara Title III Information: N/P****Federal Regulatory Information: N/P****State Regulatory Information: N/P**

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**Other Information**

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**T****Other N/P  
Information:**

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**HMIS Transportation Information**

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**Responsible Party Cage: IO907****Trans ID NO: 127372****Product ID: SIMPLE GREEN****MSDS Prepared Date: 03/25/1991****Review Date: 01/06/1992****MFN: 1****Submitter: N TN****Status CD: C****Article W/O MSDS: N****Tech Entry NOS Shipping Nm:****Radioactivity:****Form:****Net Explosive Weight:****Coast Guard AMMO Code:****Magnetism: N/P****Net Unit Weight:****AF MMAC Code:****DOD Exemption NUM:****Limited Quantity IND:****Multiple KIT Number: 0****Kit IND: N****Kit Part IND: N****Review IND: Y****Unit Of Issue: DR****Container QTY: 55 GL DR****Type Of Container: METAL****Additional Data: NOT REGULATED FOR TRANSPORTATION**

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**Detail DOT Information**

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T

DOT PSN Code: ZZZ Symbols: N/R  
DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
DOT PSN Modifier:  
Hazard Class: N/R UN ID Num: N/R  
DOT Packaging Group: N/R  
Label: N/R  
Special Provision: N/R  
Packaging Exception: N/R  
Non Bulk Pack: N/R Bulk Pack: N/R  
Max Qty Pass: N/R Max Qty Cargo: N/R  
Vessel Stow Req: N/R  
Water/Ship/Other Req: N/R

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**Detail IMO Information**

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T

IMO PSN Code: ZZZ  
IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION  
IMO PSN Modifier:  
IMDG Page Number: N/R UN Number: N/R  
UN Hazard Class: N/R IMO Packaging Group: N/R  
Subsidiary Risk Label: N/R  
EMS Number: N/R MED First Aid Guide NUM: N/R

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**Detail IATA Information**

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T

IATA PSN Code: ZZZ IATA UN ID NUM: N/R  
IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF  
TRANSPORTATION  
IATA PSN Modifier:  
IATA UN Class: N/R Subsidiary Risk Class: N/R  
IATA Label: N/R  
UN Packing Group: N/R Packing Note Passenger: N/R  
Max Quant Pass: N/R Max Quant Cargo: N/R  
Packing Note Cargo: N/R Exceptions: N/R

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**Detail AFI Information**

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TO

AFI PSN Code: ZZZ AFI Symbols:  
AFI Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
AFI PSN Modifier:  
AFI Hazard Class: N/R AFI UN ID NUM: N/R  
AFI Packing Group: N/R  
AFI Label: N/R  
Special Provisions: N/A Back Pack Reference: N/A

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**HMIS HAZCOM Label**

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**Product ID: SIMPLE GREEN****Cage: IO907****Assigned IND: Y****Company Name: SUNSHINE MAKERS INC****Street: 15922 PACIFIC COAST HIGHWAY****PO Box: N/K****City: HUNTINGTON****State: CA****Zipcode: 92649****HARBOUR****Country: US****Health Emergency Phone: 800-228-0709****Label Required IND: Y****Date Of Label Review: 11/18/1991****Status Code: C****MFG Label NO:****Label Date: 11/18/1991****Year Procured: N/K****Origination Code: G****Chronic Hazard IND: N****Eye Protection IND: YES****Skin Protection IND: YES****Signal Word: CAUTION****Respiratory Protection IND: YES****Health Hazard: Slight****Contact Hazard: Slight****Fire Hazard: None****Reactivity Hazard: None****Hazard And Precautions**

ACUTE: MAY CAUSE MILD EYE IRRITATION; MUCOUS MEMBRANES MAY BECOME IRRITATED BY CONCENTRATE-MIST. SKIN CONTACT MAY LEAD TO TEMPORARY, BUT REVERSIBLE, IRRITATION. CHRONIC: NONE LISTED BY MANUFACTURER.

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**HMIS Sponsored by****DEFENSE SUPPLY CENTER BIRMINGHAM**

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**SHML Data**

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**Item Status:** AUTHORIZED FOR SHIPBOARD USE**SHML FSC:** 6850**SHML** 013771808**NIIN:****Obsolete NIIN:** N**Replaced By NSN:** <blank>**Nomenclature:** DRY CLEANING SOLVEN**COG:** 9G - Tech Command, FMSO; Inventory Control Point, Defense  
General Supply Center**Acquisition Advice Code:** D**Special MAT'L Content Code:** T - Toxic [Click here to view Associated DOT Guide](#)**Special MAT'L IDENT. Code:** <blank>**SHML Unit of Issue:** QT - Quart**Unit Of Measure:** 1 QT**Quantity Per Unit Package:** 1**Shelf Life:** 0 {Non-Deteriorative (Type II Extendable)}**Shelf Life Action Code:** 00 - Not deteriorative. (Must always be shown when field "ShelfLife" is "0".)**Type Of Storage:** A - General Purpose, Unheated**Specification:** P-D-680 TYPE III**SPMIG:** 02283**Remarks:** <blank>

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**Nuclear Water Data**

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This is not a Nuclear Water Chemical NIIN.

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**Standard PMS Identification Number Data**

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This is not a Standard PMS Identification Number NIIN.

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**MSDS Safety Information**

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**FSC:** 6850**NIIN:** 01-377-1808**MSDS Date:** 05/22/1991**MSDS Num:** CHZCD**Submitter:** D DG**Tech Review:** 11/20/1998**Status CD:** A**Product** P-D-680 B TYPE III**MFN:** 01**ID:****Article:** N**Kit Part:** N**Responsible Party****Cage:** 0LWP6**Name:** CSD, INC**Box:** 687**City:** CONROE**State:** TX**Zip:** 77305**Country:** US**Info Phone Number:** 409-756-1065/713-797-0395(MEDICAL)**Emergency Phone Number:** 713-923-6641/800-424-9300(CHEMTREC)**Preparer's Name:** UNKNOWN



**Explanation Of Carcinogenicity**

NONE

**Signs And Symptions Of Overexposure**

IRRITATION, DROWSINESS, DIZZINESS, NAUSEA, VOMITING, HEADACHE, REDNESS, TEARING, BLURRED VISION, DEFATTING, DERMATITIS, FATIGUE

**Medical Cond Aggravated By Exposure**

INDIVIDUALS WITH PRE-EXISTING DISEASES OF THE EYE, SKIN, RESPIRATORY TRACT, CNS MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE EXPOSURES.

**First Aid**

GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED: MOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. EYES: FLUSH WITH WATER FOR 15 MINUTES, HOLDING EYELIDS OPEN. SKIN: WASH WITH SOAP & WATER. ORAL: DO NOT INDUCE VOMITING. IF CONSCIOUS, RINSE MOUTH WITH WATER SEEK IMMEDIATE MEDICAL ATTENTION. IF SPONTANEOUS VOMITING OCCURS, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF VOMITUS INTO LUNGS. KEEP AT REST.

**Spill Release Procedures**

WEAR PROTECTIVE EQUIPMENT. ELIMINATE SOURCES OF IGNITION. VENTILATE AREA. PICK UP SPILL WITH INERT ABSORBENT SUCH AS SAND, EARTH. TRANSFER INTO APPROPRIATE CONTAINER FOR DISPOSAL. PREVENT LIQUID FROM ENTERING SEWERS, WATERWAYS, LAKES, GROUND.

**Neutralizing Agent**

NOT RELEVANT

**Waste Disposal Methods**

RECLAIM BY DISTILLATION OR INCINERATE ABSORBED MATERIALS IN A LICENSED HAZARDOUS WASTE FACILITY. DISPOSAL SHOULD BE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

**Handling And Storage Precautions**

STORE AT AMBIENT TEMPERATURES AWAY FROM STRONG OXIDIZING AGENTS. KEEP OUT OF REACH OF CHILDREN.

**Other Precautions**

EMPTY CONTAINERS RETAIN RESIDUE. DO NOT WELD, SOLDER, DRILL OR EXPOSE SUCH CONTAINERS TO FLAME, SPARKS. AVOID REPEATED OR PROLONGED SKIN CONTACT. DO NOT GET IN EYES. DO NOT BREATHE VAPOR OR MIST. WASH THOROUGHLY AFTER HANDLING.

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**Fire and Explosion Hazard Information**

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**Flash Point Method:** TCC**Flash Point:****Flash Point Text:** 239F, 115C**Autoignition Temp:****Autoignition Temp Text:** 594F**Lower Limits:** 0.6%**Upper Limits:** 7.0%**Extinguishing Media**

USE WATER FOG/SPRAY, FOAM, DRY CHEMICAL, CARBON DIOXIDE.

**Fire Fighting Procedures**

WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY.

**Unusual Fire/Explosion Hazard**

CONTAINERS MAY RUPTURE DUE TO VAPOR PRESSURE BUILDUP.

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**Control Measures**

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**Respiratory Protection**

IF WORKING IN CONFINED AREAS, IF EXCESSIVE MISTING IS EXPECTED OR IF EXPOSURE MAY OR DOES EXCEED RECOMMENDED PERMISSIBLE EXPOSURE LIMITS (PEL), WEAR NIOSH-APPROVED RESPIRATORY PROTECTION FOR ORGANIC VAPORS (REFER TO 29 CFR 1910.134).

**Ventilation**

USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

**Protective Gloves**

NEOPRENE IF REPEATED CONTACT POSSIBLE

**Eye Protection**

SAFETY GLASSES/CHEMICAL SPLASH GOGGLES

**Other Protective Equipment**

EYE WASH STATION AND SAFETY SHOWER. INDUSTRIAL-TYPE WORK CLOTHING, APRON, AND BOOTS IF SPILLS OR SPLASHING CAN OCCUR.

**Work Hygienic Practices**

OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. WASH THOROUGHLY BEFORE EATING, DRINKING/SMOKING.

**Supplemental Safety and Health**

N/P

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**Physical/Chemical Properties**

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HCC: V5	NRC/State LIC No: NOT RELEVANT
Net Prop WT For Ammo: N/R	
Boiling Point:	B.P. Text: 532F - 581F
Melt/Freeze Pt:	M.P/F.P Text: <32F,<0C
Decomp Temp:	Decomp Text: UNKNOWN
Vapor Pres: 0 @ 100F	Vapor Density: >6.00
Volatile Org Content %:	Spec Gravity: 0.816
VOC Pounds/Gallon:	PH: N/R
VOC Grams/Liter:	Viscosity: 9 CST @ 77F
Evaporation Rate & Reference: UNKNOWN	
Solubility in Water: < 0.10% @ 68F	
Appearance and Odor: CLEAR, COLORLESS LIQUID - HYDROCARBON ODOR	
Percent Volatiles by Volume: N/K	Corrosion Rate: UNKNOWN

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**Reactivity Data**

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T

Stability Indicator: YES STRONG OXIDIZING AGENTS SUCH AS LIQUID CHLORINE, CONCENTRATED OXYGEN, SODIUM HYPOCHLORITE OR CALCIUM HYPOCHLORITE

Stability Condition To Avoid: NONE

Materials To Avoid:

Hazardous Decomposition Products: NONE

Hazardous Polymerization NO  
Indicator:  
Conditions To Avoid NOT RELEVANT  
Polymerization:

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**Toxicological Information**

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**T****Toxicological Information: N/P**

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**Ecological Information**

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**T****Ecological: N/P**

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**MSDS Transport Information**

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**T****Transport Information: N/P**

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**Regulatory Information**

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**T**

**Sara Title III Information: N/P**  
**Federal Regulatory Information: N/P**  
**State Regulatory Information: N/P**

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**Other Information**

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**T**

**Other N/P**  
**Information:**

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**HMIS Transportation Information**

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<b>Responsible Party Cage:</b> 0LWP6	<b>Trans ID NO:</b> 130630
<b>Product ID:</b> P-D-680 B TYPE III	
<b>MSDS Prepared Date:</b> 05/22/1991	<b>Review Date:</b> 11/20/1998
<b>MFN:</b> 1	
<b>Submitter:</b> D DG	<b>Status CD:</b> A
<b>Article W/O MSDS:</b> N	<b>Tech Entry NOS Shipping Nm:</b>
<b>Radioactivity:</b> NOT RELEVANT	<b>Form:</b>
<b>Net Explosive Weight:</b> N/R	
<b>Coast Guard AMMO Code:</b> N/R	<b>Magnetism:</b> N/P
<b>Net Unit Weight:</b> 1.7 LBS	<b>AF MMAC Code:</b>
<b>DOD Exemption NUM:</b> NOT RELEVANT	<b>Limited Quantity IND:</b>
<b>Multiple KIT Number:</b> 0	<b>Kit IND:</b> N
<b>Kit Part IND:</b> N	<b>Review IND:</b> Y

Unit Of Issue: QT  
Type Of Container: CONTAINER  
Additional Data: NOT REGULATED, PER MSDS.

Container QTY: 1 QT

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**Detail DOT Information**

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T

DOT PSN Code: ZZZ  
DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
DOT PSN Modifier:  
Hazard Class: N/R  
DOT Packaging Group: N/R  
Label: N/R  
Special Provision: N/R  
Packaging Exception: N/R  
Non Bulk Pack: N/R  
Max Qty Pass: N/R  
Vessel Stow Req: N/R  
Water/Ship/Other Req: N/R

Symbols: N/R

UN ID Num: N/R

Bulk Pack: N/R

Max Qty Cargo: N/R

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**Detail IMO Information**

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T

IMO PSN Code: ZZZ  
IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION  
IMO PSN Modifier:  
IMDG Page Number: N/R  
UN Hazard Class: N/R  
Subsidiary Risk Label: N/R  
EMS Number: N/R

UN Number: N/R

IMO Packaging Group: N/R

MED First Aid Guide NUM: N/R

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**Detail IATA Information**

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T

IATA PSN Code: ZZZ  
IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
IATA PSN Modifier:  
IATA UN Class: N/R  
IATA Label: N/R  
UN Packing Group: N/R  
Max Quant Pass: N/R  
Packaging Note Cargo: N/R

IATA UN ID NUM: N/R

Subsidiary Risk Class: N/R

Packing Note Passenger: N/R

Max Quant Cargo: N/R

Exceptions: N/R

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**Detail AFI Information**

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TO

AFI PSN Code: ZZZ  
AFI Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
AFI PSN Modifier:

AFI Symbols:

AFI Hazard Class: N/R  
AFI Packing Group: N/R  
AFI Label: N/R  
Special Provisions: N/A

AFI UN ID NUM: N/R  
Back Pack Reference: N/A

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**HMIS HAZCOM Label**

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 [Print Labels](#)

**Product ID: P-D-680 B TYPE III**  
**Cage: 0LWP6** **Assigned IND: N**  
**Company Name: CSD, INC**  
**Street: UNKNOWN**  
**City: CONROE** **State: TX** **PO Box: 687**  
**Country: US** **Zipcode: 77305**  
**Health Emergency Phone: 713-923-6641/800-424-9300(CHEMTREC)**  
**Label Required IND: Y** **Date Of Label Review: 11/20/1998**  
**Status Code: C** **MFG Label NO: UNKNOWN**  
**Label Date: 11/20/1998** **Year Procured: N/K**  
**Origination Code: F** **Chronic Hazard IND: N/P**  
**Eye Protection IND: YES** **Skin Protection IND: N/P**  
**Signal Word: WARNING** **Respiratory Protection IND: N/P**  
**Health Hazard: Slight**  
**Contact Hazard: Slight**  
**Fire Hazard: Moderate**  
**Reactivity Hazard: None**

**Hazard And Precautions**

TARGET ORGANS: EYE, SKIN, CNS, RESPIRATORY & GI TRACTS. ACUTE- MAY CAUSE SLIGHT EYE IRRITATION. PROLONGED/REPEATED SKIN CONTACT MAY CAUSE IRRITATION. HIGH VAPOR/AEROSOL CONCENTRATIONS ARE IRRITATING. MAY CAUSE CNS EFFECTS. MINIMAL TOXICITY IF INGESTED, BU ASPIRATION HAZARD. CHRONIC- MAY CAUSE DERMATITIS. STORE AWAY FROM STRONG OXIDIZERS. PICK UP SPILL WITH INERT ABSORBENT. FIRST AID- GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED: MOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEED ED. EYES: FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. SKIN: WASH WITH SOAP & WATER. ORAL: DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.

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**HMIS Sponsored by**

**DEFENSE SUPPLY CENTER BIRMINGHAM**

MATERIAL SAFETY DATA SHEET

Product Description:  
Manufacturer's Code:

INTERLUX INTERNATIONAL  
Y334

Revision Date 02/19/97  
Initial Issue Date 11/11/96

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Description INTERLUX INTERNATIONAL  
Product Description Continued  
ORANGE  
Manufacturer's Code: Y334

Manufacturer:	
Courtaulds Coatings Inc.	Courtaulds Coatings Inc.
International	Interlux
6001 Antoine Drive	2270 Morris Avenue
Houston, TX 77091	Union, NJ 07083-0386

WHMIS Classification: Not Regulated

International Info 8AM-5PM CST: 713-684-1563  
Interlux Info 8AM-5PM EST: 908-964-2206  
Emergency Telephone Number: 800-854-6813  
CHEMTREC #: 800-424-9300

2. OSHA REPORTABLE HAZARDOUS COMPONENTS (20 CFR1910.1200)

Component	Wt %	CAS Registry #
Aliphatic Hydrocarbon	50-100	064742-47-8
Mineral Spirits	50-100	008052-41-3
ALIPHATIC PETROLEUM DISTILLATE	01-10	064742-88-7
Aromatic Hydrocarbon	01-10	064742-94-5
KEROSINE	01-10	008008-20-6
Xylene	01-10	001330-20-7

EXPOSURE LIMITS (ppm)

# MATERIAL SAFETY DATA SHEET

Product Description:  
Manufacturer's Code:

INTERLUX INTERNATIONAL  
Y334

Component	ACGIH TLVs		OSHA PELs		
	TWA	STEL	TWA	STEL	
Aliphatic Hydrocarbon	N/E	N/E	N/E	N/E	
Mineral Spirits	100	N/E	500	N/E	S
ALIPHATIC PETROLEUM DISTILLATE	100	100	100	100	S
Aromatic Hydrocarbon	N/E	N/E	100	N/E	R
KEROSINE	N/EST	N/EST	N/EST	N/EST	
Xylene	100	150	100	150	S+

- (M) Maximum Exposure Limit  
(S) Occupational Exposure Standard  
(R) Supplier's Recommended Limit  
(+) There is a risk of absorption through unbroken skin.

## 3. HAZARDS IDENTIFICATION

### INHALATION:

Causes nose and throat irritation.  
Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea.

### EYE CONTACT:

Causes eye irritation.

### SKIN CONTACT:

Can be absorbed through the skin. May cause organ damage.  
Causes skin irritation.

### INGESTION:

May be fatal if swallowed and may cause organ damage.

Contains an ingredient listed as known or suspected carcinogen?

NTP: No OSHA: No IARC: No

MATERIAL SAFETY DATA SHEET

Product Description: INTERLUX INTERNATIONAL  
Manufacturer's Code: Y334

4. FIRST AID MEASURES

GENERAL:

In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

INHALATION:

Remove to fresh air. If discomfort is present or breathing is absent get medical attention immediately.

EYE CONTACT:

Flush immediately with plenty of water for 15 minutes until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT:

Flush with large amounts of water. Use soap if available. Remove severely contaminated clothing (including shoes) and wash before reuse. If irritation persists, get medical attention.

INGESTION:

If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

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5. FIRE AND EXPLOSION DATA

Flashpoint: 100 F 37.774 C  
OSHA Classification: Combustible Liquid - Class II  
LEL: .5

FIRE AND EXPLOSION HAZARDS:

Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode when exposed to extreme heat. In the absence of electricity, a water spray (a fog nozzle is preferred) may be used to cool containers. Decomposition and combustion products may be toxic.

EXTINGUISHING MEDIA:

Foam, Carbon Dioxide, Dry Chemical

MATERIAL SAFETY DATA SHEET

Product Description:  
Manufacturer's Code:

INTERLUX INTERNATIONAL  
Y334

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6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Absorb spill with an inert material (e.g., dry sand or earth), then place in a chemical waste container.

-----  
7. HANDLING AND STORAGE

GENERAL:

Keep container closed. Loosen closure cautiously before opening. Store in a cool, well ventilated place away from incompatible materials. (See Stability and Reactivity Section 10.) Keep away from heat, sparks and flames. Protect material from direct sunlight. Ground and bond containers when transferring materials. Empty containers may retain hazardous properties. Follow all MSDS/label warnings, even after the container is emptied.

-----  
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide sufficient ventilation, in volume and pattern, to:

- a) keep the TLV of the hazardous ingredients below the limits specified in Section Two.
- b) remove volatiles produced during cure and decomposition products produced during welding or cutting on surfaces coated with this product.

PERSONAL PROTECTION:

RESPIRATOR:

Do not breathe vapors or spray mist. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacture's directions for respirator use.

MATERIAL SAFETY DATA SHEET

Product Description: INTERLUX INTERNATIONAL  
Manufacturer's Code: Y334

PROTECTIVE EQUIPMENT:

CLOTHING: As needed, use body protection to avoid contact with product.

EYE: Safety glasses, chemical goggles and/or a face shield should be worn to prevent eye contact.

GLOVES: Wear chemical resistant gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity: .981  
Boiling Point: 307 F 152.7625 C  
Physical State: liquid  
Evaporation Rate: Slower/ether  
Vapour Density: Heavier than air

10. STABILITY AND REACTIVITY

GENERAL:

This product is stable and hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong oxidizing agents.

HAZARDOUS DECOMPOSITION:

May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

MATERIAL SAFETY DATA SHEET

Product Description:  
Manufacturer's Code:

INTERLUX INTERNATIONAL  
Y334

11. TOXICOLOGICAL INFORMATION

There is no data available on the product itself.  
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

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12. ECOLOGICAL INFORMATION

There is no data available on the product itself.

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13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations.  
Do not incinerate unopened containers.

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14. TRANSPORT INFORMATION

DOT (Department of Transportation):  
Proper Shipping Name: Paint  
Packing Group: Not Regulated

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15. REGULATORY INFORMATION

TSCA (Toxic Substance Control Act):  
Components of this product are listed on the TSCA Inventory.

CERCLA (Comprehensive Response Compensation, and Liability Act):  
We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III (Superfund Amendments and Reauthorization Act):

MATERIAL SAFETY DATA SHEET

Product Description: INTERLUX INTERNATIONAL  
Manufacturer's Code: Y334

None known unless chemicals are specified below.

Section 302 Reportable Ingredients

313 Reportable Ingredients

001330-20-7 Xylene, mixture of isomers

CALIFORNIA PROPOSITION 65:

None known unless specified below

Warning: This product contains a chemical known to the State of California to cause cancer.

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16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End of Document

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**SHML Data**

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**Item Status:** AUTHORIZED FOR SHIPBOARD USE**SHML FSC:** 9150**SHML** 010536688**NIIN:****Obsolete NIIN:** N**Replaced By NSN:** <blank>**Nomenclature:** CLEANER,LUBRICANT A**COG:** 9G - Tech Command, FMSO; Inventory Control Point, Defense  
General Supply Center**Acquisition Advice Code:** D**Special MAT'L Content Code:** T - Toxic [Click here to view Associated DOT Guide](#)**Special MAT'L IDENT. Code:** <blank>**SHML Unit of Issue:** GL - Gallon**Unit Of Measure:** 1 GL**Quantity Per Unit Package:** 4**Shelf Life:** 7 {36 Months (Type II Extendable)}**Shelf Life Action Code:** C0 - Check/inspect/test in accordance with inventory manager's  
instructions.**Type Of Storage:** A - General Purpose, Unheated**Specification:** MIL-L-63460**SPMIG:** 02057**Remarks:** REQUIRED TO SUPPORT CIWS MK 15 SYSTEMS.

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**Nuclear Water Data**

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This is not a Nuclear Water Chemical NIIN.

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**Standard PMS Identification Number Data**

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**SPIN FSC:** 9150**SPIN NIIN:** 010536688**SPIN:** 2057A

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**MSDS Safety Information**

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**FSC:** 9150**NIIN:** 01-053-6688**MSDS Date:** 07/18/1991**MSDS Num:** BWMRC**Submitter:** D DG**Tech Review:** 02/28/1995**Status CD:** C**Product** MIL-L-63460 D/0463460**MFN:** 01**ID:****Article:** N**Kit Part:** N.**Responsible Party****Cage:** 63182**Name:** HULS AMERICA INC**Address:** 80 CENTENNIAL AVE/TURNER PLACE**City:** PISCATAWAY**State:** NJ**Zip:** 08854**Country:** US**Info Phone Number:** 201-763-7173**Emergency Phone Number:** 201-763-7173

Preparer's Name: P. A. PARKER

Proprietary Ind: N

Review Ind: Y

Published: Y

Special Project CD: N

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**Contractor Summary**

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Cage: 63182      Name: HULS AMERICA INC  
Address: TURNER PLACE      Box: 365  
City: PISCATAWAY      State: NJ      Zip: 08855  
Country: US      Phone: 201-763-7173

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**Item Description Information**

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Item Manager: S9G  
Item Name: CLEANER, LUBRICANT AND PRESERVATIVE  
Specification Number: MIL-L-63460      Type/Grade/Class: NONE  
Unit of Issue: GL      Quantitative Expression: NK  
UI Container Qty: 1 GALLON      Type of Container: PLASTIC BOTTL

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**Ingredients**

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Cas: 46742-46-7      Code: M      RTECS #: 1003470PS      Code: M  
Name: PETROLEUM SOLVENT  
% Text: 20      Environmental Wt:  
Other REC Limits: 300 PPM (EXXON)  
OSHA PEL: 5 MG/M3 AS OIL MIST      Code: M      OSHA      Code:  
STEL:      Code:  
ACGIH TLV: 5 MG/M3 AS OIL MIST      Code: M      ACGIH N/P      Code:  
STEL:      Code:  
EPA Rpt Qty:      DOT Rpt  
Qty:  
Ozone Depleting Chemical:

Cas: 103-09-3      Code: M      RTECS #: AH5600000      Code: M  
Name: ETHYLHEXYL ACETATE  
% Text: 20      Environmental Wt:  
Other REC Limits: NONE RECOMMENDED  
OSHA PEL: NOT ESTABLISHED      Code: M      OSHA      Code:  
STEL:      Code:  
ACGIH TLV: NOT ESTABLISHED      Code: M      ACGIH N/P      Code:  
STEL:      Code:  
EPA Rpt Qty:      DOT Rpt  
Qty:  
Ozone Depleting Chemical: N

Cas:      Code: X      RTECS #: 1003634OB      Code: M  
Name: ORGANO BARIUM COMPOUND  
% Text: 4      Environmental Wt:  
Other REC Limits: NONE RECOMMENDED

OSHA PEL: NOT ESTABLISHED Code: M  
 ACGIH TLV: NOT ESTABLISHED Code: M  
 EPA Rpt Qty:

OSHA  
 STEL: Code:  
 ACGIH N/P Code:  
 STEL:  
 DOT Rpt  
 Qty:

**Ozone Depleting Chemical:**

Cas: Code: X  
 Name: BARIUM COMPOUND AS BA  
 % Text: 1  
 OSHA PEL: NOT ESTABLISHED Code: M  
 ACGIH TLV: NOT ESTABLISHED Code: M  
 EPA Rpt Qty:

RTECS #: 1006925BC Code: M

Environmental Wt:  
 Other REC Limits: NONE RECOMMENDED

OSHA  
 STEL: Code:  
 ACGIH N/P Code:  
 STEL:  
 DOT Rpt  
 Qty:

**Ozone Depleting Chemical:**

Cas: Code: X  
 Name: MOLYBDENUM COMPOUNDS  
 % Text: 2  
 OSHA PEL: 15 MG/M3 TDUST Code: M  
 ACGIH TLV: 10 MG/M3 TDUST Code: M  
 EPA Rpt Qty:

RTECS #: 1001080MC Code: M

Environmental Wt:  
 Other REC Limits: NONE RECOMMENDED

OSHA  
 STEL: Code:  
 ACGIH N/P Code:  
 STEL:  
 DOT Rpt  
 Qty:

**Ozone Depleting Chemical:****Health Hazards Data**

LD50 LC50 Mixture TLV FOR OIL MIST IS 5 MG/M3.

Route Of Entry Inds - Inhalation: NO Skin: NO Ingestion: NO  
 Carcinogenicity Inds - NTP: NO IARC: NO OSHA: NO

**Health Hazards Acute And Chronic**

TARGET ORGANS:EYES, SKIN, RESPIRATORY TRACT. ACUTE- WARNING! SEVERE EYE IRRITANT. MODERATE SKIN & RESPIRATORY TRACT IRRITANT. OVEREXPOSURE MAY CAUSE HEADACHES, DIZZINESS, UNCONSCIOUSNESS EVEN DEATH. ASPIRATION HAZARD. CAN CAUSE LUNG DAMAGE. CHRONIC- UNKNWN.

**Explanation Of Carcinogenicity**

NONE

**Signs And Symptions Of Overexposure**

EYES, SKIN, RESPIRATORY TRACT IRRITATION, HEADACHES, DIZZINESS, UNCONSCIOUSNESS, DEATH

**Medical Cond Aggravated By Exposure**

PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS PRODUCT.

**First Aid**

GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED: REMOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. EYES: FLUSH WITH WATER FOR 15 MINUTES, HOLDING EYELIDS OPEN. SKIN: WASH WITH SOAP & WATER. ORAL: DO NOT INDUCE VOMITING. IF CONSCIOUS, RINSE MOUTH WITH WATER. SEEK MEDICAL ATTENTION. IF SPONTANEOUS VOMITING OCCURS, MONITOR FOR BREATHING DIFFICULTY.

**Spill Release Procedures**

DIKE AND CONTAIN SPILL. DO NOT ALLOW MATERIAL TO ENTER DRAINS, SEWERS OR WATERWAYS. RECOVER MATERIAL IF POSSIBLE. ABSORB SPILL WITH NON-FLAMMABLE ABSORBENT AND PLACE INTO PROPER CONTAINERS FOR DISPOSAL. REMOVE LARGE SPILLS WITH VACUUM TRUCKS OR PUMP.

**Neutralizing Agent**

NOT RELEVANT

**Waste Disposal Methods**

DISPOSE OF WASTE IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. RCRA EMERGENCY NUMBER: 800-424-9346. DO NOT CONTAMINATE ANY LAKES, STREAMS, PONDS OR UNDERGROUND WATER SUPPLY.

**Handling And Storage Precautions**

STORE IN COOL, DRY PLACE AWAY FROM HEAT, FLAME & STRONG OXIDANTS. KEEP CONTAINERS CLOSED WHEN NOT IN USE. KEEP OUT OF REACH OF CHILDREN.

**Other Precautions**

WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING OR DRINKING. DO NOT WELD, HEAT OR DRILL CONTAINER. RESIDUE MAY IGNITE. AVOID BREATHING VAPOR OR MISTS. AVOID CONTACT WITH EYES OR SKIN.

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**Fire and Explosion Hazard Information**

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**Flash Point Method:** SCC

**Flash Point:**

**Flash Point Text:** 165F, 74C

**Autoignition Temp:**

**Autoignition Temp Text:** N/K

**Lower Limits:** UNKNOWN

**Upper Limits:** UNKNOWN

**Extinguishing Media**

USE WATER FOG, CARBON DIOXIDE, FOAM/DRY CHEMICAL. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT MAY FLOAT & REIGNITE.

**Fire Fighting Procedures**

WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND NIOSH-APPROVED SELF CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY.

**Unusual Fire/Explosion Hazard**

WILL PRODUCE TOXIC FUMES. WATER OR FOAM MAY CAUSE FROTHING WHICH CAN BE VIOLENT. CONTAINER MAY BURST.

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**Control Measures**

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**Respiratory Protection**

NO SPECIAL RESPIRATORY PROTECTION IS NORMALLY REQUIRED. HOWEVER, IF OVERHEATED, USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE.

**Ventilation**

USE ADEQUATE VENTILATION TO KEEP OIL MISTS OF THIS MATERIAL BELOW APPLICABLE STANDARD(S).

**Protective Gloves**

RUBBER, LATEX TO MINIMIZE SKIN CONTACT

**Eye Protection**

SAFETY GOGGLES/FACE SHIELD

**Other Protective Equipment**

EYE WASH STATION AND SAFETY SHOWER. INDUSTRIAL-TYPE WORK CLOTHING AND APRON AS REQUIRED.

**Work Hygienic Practices**

OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. DO NOT WEAR CONTAMINATED CLOTHING OR FOOTWEAR.

**Supplemental Safety and Health**

N/P

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**Physical/Chemical Properties**

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HCC: T6	NRC/State LIC No: NOT RELEVANT
Net Prop WT For Ammo: N/R	
Boiling Point:	B.P. Text: >400F,>204C
Melt/Freeze Pt:	M.P/F.P Text: POUR: -74F
Decomp Temp:	Decomp Text: UNKNOWN
Vapor Pres: UNKNOWN	Vapor Density: >1
Volatile Org Content %:	Spec Gravity: 0.86
VOC Pounds/Gallon:	PH: N/R
VOC Grams/Liter:	Viscosity: UNKNOWN
Evaporation Rate & Reference: <1 (N-BUTYL ACETATE=1)	
Solubility in Water: NEGLIGIBLE	
Appearance and Odor: LIGHT YELLOW TO BROWN LIQUID - MILD SOLVENT ODOR	
Percent Volatiles by Volume: N/K	Corrosion Rate: UNKNOWN

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**Reactivity Data**

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Stability Indicator: YES STRONG OXIDIZING AGENTS  
Stability Condition To Avoid: EXCESSIVE HEAT, OPEN FLAME  
Materials To Avoid:  
Hazardous Decomposition Products: MAY FORM CARBON MONOXIDE, CARBON DIOXIDE AND TOXIC FUMES.  
Hazardous Polymerization NO  
Indicator:  
Conditions To Avoid NOT RELEVANT  
Polymerization:

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**Toxicological Information**

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Toxicological Information: N/P

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**Ecological Information**

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Ecological: N/P

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**MSDS Transport Information**

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Transport Information: N/P

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**Regulatory Information**

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T

Sara Title III Information: N/P  
Federal Regulatory Information: N/P  
State Regulatory Information: N/P

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**Other Information**

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Other N/P  
Information:

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**HMIS Transportation Information**

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Responsible Party Cage: 63182	Trans ID NO: 103490
Product ID: MIL-L-63460 D/0463460	
MSDS Prepared Date: 07/18/1991	Review Date: 02/28/1995
MFN: 1	
Submitter: D DG	Status CD: C
Article W/O MSDS: N	Tech Entry NOS Shipping Nm:
Radioactivity:	Form:
Net Explosive Weight:	
Coast Guard AMMO Code:	Magnetism: N/P
Net Unit Weight: 7.2 LBS	AF MMAC Code:
DOD Exemption NUM:	Limited Quantity IND:
Multiple KIT Number: 0	Kit IND: N
Kit Part IND: N	Review IND: Y
Unit Of Issue: GL	Container QTY: 1 GALLON
Type Of Container: PLASTIC BOTTL	
Additional Data:	

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**Detail DOT Information**

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T

DOT PSN Code: ZZZ	Symbols: N/R
DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION	
DOT PSN Modifier:	
Hazard Class: N/R	UN ID Num: N/R
DOT Packaging Group: N/R	
Label: N/R	
Special Provision: N/R	
Packaging Exception: N/R	

Non Bulk Pack: N/R  
Max Qty Pass: N/R  
Vessel Stow Req: N/R  
Water/Ship/Other Req: N/R

Bulk Pack: N/R  
Max Qty Cargo: N/R

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**Detail IMO Information**

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IMO PSN Code: ZZZ  
IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION  
IMO PSN Modifier:  
IMDG Page Number: N/R  
UN Hazard Class: N/R  
Subsidiary Risk Label: N/R  
EMS Number: N/R  
UN Number: N/R  
IMO Packaging Group: N/R  
MED First Aid Guide NUM: N/R

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**Detail IATA Information**

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T

IATA PSN Code: ZZZ  
IATA UN ID NUM: N/R  
IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
IATA PSN Modifier:  
IATA UN Class: N/R  
IATA Label: N/R  
UN Packing Group: N/R  
Max Quant Pass: N/R  
Packing Note Cargo: N/R  
Subsidiary Risk Class: N/R  
Packing Note Passenger: N/R  
Max Quant Cargo: N/R  
Exceptions: N/R

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**Detail AFI Information**

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TO

AFI PSN Code: ZZZ  
AFI Symbols:  
AFI Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
AFI PSN Modifier:  
AFI Hazard Class: N/R  
AFI Packing Group: N/R  
AFI Label: N/R  
Special Provisions: N/A  
AFI UN ID NUM: N/R  
Back Pack Reference: N/A

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**HMIS HAZCOM Label**

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 **Print Labels**

Product ID: MIL-L-63460 D/0463460  
Cage: 63182  
Assigned IND: N  
Company Name: HULS AMERICA INC  
Street: TURNER PLACE

PO Box: 365

City: PISCATAWAY  
Country: US

State: NJ

Zipcode: 08855

Health Emergency Phone: 201-763-7173

Label Required IND: Y

Date Of Label Review: 02/28/1995

Status Code: C

MFG Label NO: NOT RELEVANT

Label Date: 02/28/1995

Year Procured: N/K

Origination Code: F

Chronic Hazard IND: N/P

Eye Protection IND: YES

Skin Protection IND: N/P

Signal Word: WARNING

Respiratory Protection IND: N/P

Health Hazard: Moderate

Contact Hazard: Moderate

Fire Hazard: Moderate

Reactivity Hazard: None

#### Hazard And Precautions

TARGET ORGANS:EYES, SKIN, RESPIRATORY TRACT. ACUTE- WARNING! SEVERE EYE IRRITANT. MODERATE SKIN & RESPIRATORY TRACT IRRITANT. MAY CAUSE DIZZINESS, UNCONSCIOUSNESS. ASPIRATION HAZARD. CHRONIC- UNKNOWN. STORE IN AWAY FROM HEAT, FLAME & STRONG OXIDANTS. ABSORB SPILL WITH NON-FLAMMABLE ABSORBENT & PLACE INTO PROPER CONTAINERS FOR DISPOSAL. FIRST AID- GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED:REMOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. EYES:FLUSH WITH WATER FOR 15 MINUTES, HOLDING EYELIDS OPEN. SKIN:WASH WITH SOAP & WATER. ORAL:DO NOT INDUCE VOMITING. IF CONSCIOUS, RINSE MOUTH WITH WATER. SEEK MEDICAL ATTENTION.

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DEFENSE SUPPLY CENTER BIRMINGHAM

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**SHML Data**

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**Item Status:** AUTHORIZED FOR SHIPBOARD USE**SHML FSC:** 9150**SHML** 005306814**NIIN:****Obsolete NIIN:** N**Replaced By NSN:** <blank>**Nomenclature:** GREASE,WIRE ROPE-EX**COG:** 9G - Tech Command, FMSO; Inventory Control Point, Defense  
General Supply Center**Acquisition Advice Code:** D**Special MAT'L Content Code:** S - Oils/Petroleum Products (Not otherwise specified) [Click here to view Associated DOT Guide](#)**Special MAT'L IDENT. Code:** <blank>**SHML Unit of Issue:** CN - Can (Non-definitive  
Unit of Issue)**Unit Of Measure:** 35 LB**Quantity Per Unit Package:** 1**Shelf Life:** 6 {24 Months (Type II Extendable)}**Shelf Life Action Code:** C0 - Check/inspect/test in accordance with inventory manager's  
instructions.**Type Of Storage:** G - Flammable**Specification:** MIL-G-18458**SPMIG:** 00585**Remarks:** REQUIRED TO SUPPORT CIWS MK 15 SYSTEMS

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**Nuclear Water Data**

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This is not a Nuclear Water Chemical NIIN.

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**Standard PMS Identification Number Data**

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**SPIN FSC:** 9150**SPIN NIIN:** 005306814**SPIN:** 0585A

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**MSDS Safety Information**

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**FSC:** 9150**NIIN:** 00-530-6814**MSDS Date:** 11/13/1990**MSDS Num:** BFDDF**Submitter:** D DG**Tech Review:** 03/23/1991**Status CD:** C**Product SA 827 7092 GREASE  
ID:****MFN:** 01**Article:** N**Kit Part:** N**Responsible Party****Cage:** 70878**Name:** SOUTHWEST PETRO-CHEM DIV WITCO CHEMICAL  
CORP**Address:** 1400 S HARRISON**Box:** 1974**City:** OLATHE**State:** KS**Zip:** 66061**Country:** US

Emergency Phone Number: 913-782-5800

Preparer's Name: RAY LAWSON, MGR.TECH.COMP

Proprietary Ind: N

Review Ind: Y

Published: Y

Special Project CD: N

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**Preparer Co. when other than Responsible Party Co.**

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Cage: 70878 Assigned Ind: N

Name: SOUTHWEST PETRO-CHEM DIV WITCO CHEMICAL  
CORP

Address: 1400 S HARRISON

Box: 1974

City: OLATHE

State: KS

Zip: 66061

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**Contractor Summary**

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Cage: 70878

Name: SOUTHWEST PETRO-CHEM DIV WITCO CHEMICAL  
CORP

Address: 1400 S HARRISON

Box: 1974

City: OLATHE

State: KS

Zip: 66061

Country: US

Phone: 913-782-5800/800-424-9300(CHEMTREC)

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**Item Description Information**

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Item Manager: S9G

Item Name: GREASE, WIRE ROPE-EXPOSED GEAR

Specification Number: NK

Type/Grade/Class: NK

Unit of Issue: CN

Quantitative Expression: 00000000035LB

UI Container Qty: 35 LBS

Type of Container: CAN

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**Ingredients**

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Cas:

Code: X

RTECS #: 1001346PO Code: M

Name: PETROLEUM OIL

% Text: N/K

Environmental Wt:

Other REC Limits: N/P

OSHA PEL: N/P

Code:

OSHA

Code:

STEL:

ACGIH TLV: 5MG/CUM(MIST)

Code: M

ACGIH N/P

Code:

STEL:

EPA Rpt Qty:

DOT Rpt

Qty:

Ozone Depleting Chemical:

Cas: 7439-92-1

Code: M

RTECS #: OF7525000 Code: M

Name: LEAD (SARA III)

% Text: 0.35

Environmental Wt:

Other REC Limits: N/P

OSHA PEL: 0.05 MG/M3;1910.1025	Code: M	OSHA STEL:	Code:
ACGIH TLV: 0.15 MG/M3;DUST 9192	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty: 1 LB		DOT Rpt 1 LB Qty:	

Ozone Depleting Chemical: N

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Cas:	Code: X	RTECS #: 1001072TA	Code: M
Name: THICKENING AGENTS (TYPE NOT KNOWN)			
% Text: N/K		Environmental Wt:	
		Other REC Limits: N/P	
OSHA PEL: N/P	Code:	OSHA STEL:	Code:
ACGIH TLV: N/K	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty:		DOT Rpt Qty:	

Ozone Depleting Chemical:

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### Health Hazards Data

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**LD50 LC50 Mixture** N/P

**Route Of Entry Inds - Inhalation:** N/P      **Skin:** N/P      **Ingestion:** N/P

**Carcinogenicity Inds - NTP:** N/P      **IARC:** N/P      **OSHA:** N/P

**Health Hazards Acute And Chronic**

N/P

**Explanation Of Carcinogenicity**

N/P

**Signs And Symptions Of Overexposure**

EYES:MAY CAUSE IRRIT ON CONTCT;SKIN:PROLONGD CONTCT MAY IRRITAT;INGEST:HAMFUL-LEAD POISONG;INH:N/K.

**Medical Cond Aggravated By Exposure**

N/P

**First Aid**

INHALE:REMOVE TO FRESH AIR, GIVE CPR/O\*2 IF NEED;EYES/SKIN:FLUSH W LG AMTS H\*20 FOR 15 MIN;INGEST:RINSE MOUTH; GET MEDICAL ATTENTION FOR EYES, BREATHING DIFFICULTY, OR OTHER SYMPTOMS OF OVEREXPOSURE.

**Spill Release Procedures**

ELIM IGN SOURCES.USE APPROPRIATE PROTECTV EQUIPMENTS.TRANSFER BULK OF MATERIAL INTO ANOTHER CONTAINER.ABSORB REMAINING RESIDUE WITH PROPER ABSORBENTS.SWEEP UP & DISPOSE AS SOLID WASTE IAW LOCAL,STATE & FEDERAL REGULATIONS.

**Neutralizing Agent**

N/P

**Waste Disposal Methods**

KEEP IN COVERED DRUMS,PENDING DISPOSAL. HANDLE & DISPOSE IN FULL COMPLIANCE WITH ALL APPLICABLE INTERNATIONAL,FEDERAL,STATE, & LOCAL REGULATIONS.

**Handling And Storage Precautions**

KEEP CONTAINERS CLOSED.AVOID CONTACT WITH SKIN,EYES & CLOTHING.WASH THOROUGHLY AFTER HANDLING.WASH CLOTHES BEFORE REUSE.KEEP AWAY FORM FEED/FOOD PROD.

**Other Precautions**

KEEP OUT OF REACH OF CHILDREN.

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**Fire and Explosion Hazard Information**

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**Flash Point Method:** CC**Flash Point:****Flash Point Text:** 356F/180C**Autoignition Temp:****Autoignition Temp Text:** N/A**Lower Limits:** N/K**Upper Limits:** N/K**Extinguishing Media**

DRY CHEMICAL, WATER FOG, CARBON DIOXIDE, FOAM, OR SAND/EARTH.

**Fire Fighting Procedures**

WATER MAY CAUSE FROTHING. DENSE SMOKE. FIRE FIGHTERS SHOULD WEAR AN APPROVED SELF-CONTAINED BREATHING APPARATUS.

**Unusual Fire/Explosion Hazard**

DENSE SMOKE.

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**Control Measures**

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**Respiratory Protection**

USE NIOSH/MSHA APPROVED RESPIRATOR FOR LEAD OR ORGANIC VAPORS/MIST

**Ventilation**

NORMAL ROOM VENTILATION.

**Protective Gloves**

RUBBER/PLASTIC

**Eye Protection**

SAFETY/CHEM GOGGLES

**Other Protective Equipment**

NONE KNOWN

**Work Hygienic Practices**

N/P

**Supplemental Safety and Health**

NOTE: MIL. SPEC. REFERENCE MIL-G-18458B (SH)

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**Physical/Chemical Properties**

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**HCC:** V6**NRC/State LIC No:****Net Prop WT For Ammo:****Boiling Point:****B.P. Text:** >410F/>210C**Melt/Freeze Pt:****M.P/F.P Text:** N/A**Decomp Temp:****Decomp Text:** N/A**Vapor Pres:** N/K**Vapor Density:** N/K**Volatile Org Content %:****Spec Gravity:** 0.936**VOC Pounds/Gallon:****PH:** N/P**VOC Grams/Liter:****Viscosity:** N/P**Evaporation Rate & Reference:** UNKNOWN**Solubility in Water:** NEGLIGIBLE**Appearance and Odor:** OFF WHITE SEMI-SOLID WITH MINERAL OIL ODOR

Percent Volatiles by Volume: UNK

Corrosion Rate: N/P

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**Reactivity Data**

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Stability Indicator: YES STRONG OXIDIZING

AGENTS;E.G.,HCRO\*4,H\*2O2,BR\*2

Stability Condition To Avoid: UNKNOWN

Materials To Avoid:

Hazardous Decomposition Products: CO,CO\*2,POSSIBLY OTHER

Hazardous Polymerization NO

Indicator:

Conditions To Avoid NOT KNOWN

Polymerization:

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**Toxicological Information**

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Toxicological Information: N/P

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**Ecological Information**

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Ecological: N/P

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**MSDS Transport Information**

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Transport Information: N/P

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**Regulatory Information**

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T

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

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**Other Information**

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TOther N/P  
Information:

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**HMIS Transportation Information**

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Responsible Party Cage: 70878

Trans ID NO: 75458

Product ID: SA 827 7092 GREASE

MSDS Prepared Date: 11/13/1990

Review Date: 10/30/1987

MFN: 1

Submitter: D DG

Status CD: C

Article W/O MSDS: N

Tech Entry NOS Shipping Nm:

Radioactivity:

Form:

Net Explosive Weight:  
Coast Guard AMMO Code:  
Net Unit Weight: 35 LBS  
NET  
DOD Exemption NUM:  
Multiple KIT Number: 0  
Kit Part IND: N  
Unit Of Issue: CN  
Type Of Container: CAN  
Additional Data: ITEM NOT REGULATED FOR TRNSP.

Magnetism: N/P  
AF MMAC Code:  
Limited Quantity IND:  
Kit IND: N  
Review IND: Y  
Container QTY: 35 LBS

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**Detail DOT Information**

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DOT PSN Code: ZZZ Symbols: N/R  
DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION  
DOT PSN Modifier:  
Hazard Class: N/R UN ID Num: N/R  
DOT Packaging Group: N/R  
Label: N/R  
Special Provision: N/R  
Packaging Exception: N/R  
Non Bulk Pack: N/R Bulk Pack: N/R  
Max Qty Pass: N/R Max Qty Cargo: N/R  
Vessel Stow Req: N/R  
Water/Ship/Other Req: N/R

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**Detail IMO Information**

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IMO PSN Code: ZZZ  
IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION  
IMO PSN Modifier:  
IMDG Page Number: N/R UN Number: N/R  
UN Hazard Class: N/R IMO Packaging Group: N/R  
Subsidiary Risk Label: N/R  
EMS Number: N/R MED First Aid Guide NUM: N/R

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**Detail IATA Information**

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IATA PSN Code: ZZZ IATA UN ID NUM: N/R  
IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF  
TRANSPORTATION  
IATA PSN Modifier:  
IATA UN Class: N/R Subsidiary Risk Class: N/R  
IATA Label: N/R  
UN Packing Group: N/R Packing Note Passenger: N/R  
Max Quant Pass: N/R Max Quant Cargo: N/R  
Packing Note Cargo: N/R Exceptions: N/R

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**Detail AFI Information**


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TO

**AFI PSN Code:** ZZZ                      **AFI Symbols:**  
**AFI Proper Shipping Name:** NOT REGULATED BY THIS MODE OF TRANSPORTATION  
**AFI PSN Modifier:**  
**AFI Hazard Class:** N/R                      **AFI UN ID NUM:** N/R  
**AFI Packing Group:** N/R  
**AFI Label:** N/R  
**Special Provisions:** N/A                      **Back Pack Reference:** N/A

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**HMIS HAZCOM Label**


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**Product ID:** SA 827 7092 GREASE  
**Cage:** 70878                      **Assigned IND:** N  
**Company Name:** SOUTHWEST PETRO-CHEM DIV WITCO CHEMICAL CORP  
**Street:** 1400 S HARRISON                      **PO Box:** 1974  
**City:** OLATHE                      **State:** KS                      **Zipcode:** 66061  
**Country:** US  
**Health Emergency Phone:** 913-782-5800  
**Label Required IND:** Y                      **Date Of Label Review:** 12/16/1998  
**Status Code:** C                      **MFG Label NO:**  
**Label Date:** 12/16/1998                      **Year Procured:** N/K  
**Origination Code:** G                      **Chronic Hazard IND:** N/P  
**Eye Protection IND:** N/P                      **Skin Protection IND:** N/P  
**Signal Word:** N/P                      **Respiratory Protection IND:** N/P  
**Health Hazard:**  
**Contact Hazard:**  
**Fire Hazard:**  
**Reactivity Hazard:**

**Hazard And Precautions**

EYES:MAY CAUSE IRRIT ON CONTCT;SKIN:PROLONGD CONTCT MAY  
 IRRITAT;INGEST:HAMFUL-LEAD POISONG;INH:N/K.

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